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Original Articles

CHRONIC POISONING BY ACETANILID.*

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PHILADELPHIA.

That chronic poisoning characterized by degenerative changes in the blood, and by physical disability, may result from the continued ingestion of anilin derivatives is well known, as it is also well recognized that acetanilid, one of these products, because of its small cost and its toxicity in excess of others of this group in common use, renders it particularly liable to be the offending agent. Acetanilid is the chief ingredient in headache powders so generally dispensed by pharmacists without prescription, as it is in certain secret nostrums both in use by the rank and file of the profession, and, unfortunately, thus introduced by them to the laity.

The toxicity of acetanilid in common with related coal-tar products of the antipyretic group, has long been known, and the serious, if not fatal, results which may follow its incautious use in fevers and debilitating conditions should have in past years been brought forcibly to the attention of the reckless seeker after a remedy to reduce temperature, or to assuage pain. But the knowledge of the toxic action of this group, and especially of acetanilid, has had little effect on the unscrupulous, who have found a ready market for compounds offered as analgesics. Attempts have been made to overcome the immediate ill effects of the drug by combining it with small quantities of caffein, and a very popular nostrum now—I should suppose pretty well known throughout the civilized world—contains these as chief ingredients, which also enter into the makeup of presumably nearly all headache powders.

I have under observation a man, aged 40, of splendid physical development, who recently consulted me concerning his digestion. Although of good habits, not given to alcohol and but moderately to tobacco; getting an abundance of fresh air and exercise, and having no element in his life unconducive to well-being, he has been unaccountably more or less out of sorts for the past year or two. There were loss of cardiac tone, a sallow, peculiar dusky hue of the skin, and anorexia. Examination of the stomach contents showed hyperchlorhydria, a condition not regarded as responsible for his partial invalidism. My laboratory associate, Dr. Ghriskey, like myself, was struck by the dusky hue of the skin, not to be attributed to respiratory or cardiac disability. Inquiry elicited the fact that for two or three years his habit had been to take headache powders; he had formed the habit of resorting to them at first for the relief of headache, and finally when at all out of sorts. He invariably had taken one on rising in the morning, and sometimes several (8 to 10) through the day, but often only 2 or 3. These were a proprietary preparation sold under the name of "headache powders,"[1] or a frank prescription, which he obtained without a writing, of acetanilid and caffein; or antikamnia, which he also had combined with acetanilid and salol. Lately he had taken very few; that morning three before his visit to me. The blood, as it stood on the ear, showed the characteristic chocolate hue indicating the presence of methemoglobin. Hemoglobin estimation was thus impossible. Inspection showed moderate variation in size and shape of erythrocytes. These were 3,860,000 per c.mm.; the leucocytes, 9,200. Differential count of 550 leucocytes (Dr. Ghriskey):

Polymorphonuclears	62.20 per cent.
Small lymphocytes	13.66 "
Large lymphocytes	23.81 "
Eosinophiles	0.33 "

Decided variation in size of lymphocytes, from very small to large. The greater number were of medium size. Of the large, 18 were in the transitional form. During the above enumeration there were noted 1 megaloblast and 1 normoblast. Blood placques were increased.

The blood examination was made five hours after the only meal of the day, a breakfast of the whites of two eggs, toast, and two cups of weak tea. There was, therefore, present a pathologic leucocytosis and a diminution in the erythrocytes, the cause of which, an acetanilid toxemia, was not hard to seek, other factors being excluded by careful inquiry. The urine showed nothing characteristic.

This case of mild acetanilid poisoning is mentioned in passing as an example of one of perhaps many similar in which a slight or greater degree of invalidism might be traced to the incautious formation of the acetanilid, phenacetin, or a similar habit.

I recall the case of a woman, aged about 38, under observation some years ago, who had curious attacks of cardiac debility, attended with dyspnea and on one occasion marked edema of the legs. A grave form of mitral disease had been diagnosed by her previous attendant, a therapeutist of eminence. I saw her often casually in attendance on a member of her family. In several examinations there was absolutely no indication of cardiac disease, valvular or otherwise, and no history of any ailment that could have been a factor in originating such. The patient was of more than ordinary robust build, the hue of the skin was habitually dusky, and the breath intensely, peculiarly fetid. I discovered that for a long time she had been a phenacetin habitué.

* Read by title at the meeting of the Association of American Physicians, at Washington, 1905.

1. One of these, a proprietary preparation largely advertised and sold in Philadelphia under the name of a certain doctor's headache powder, I found by analysis to consist solely of acetanilid, with a little coloring matter.

Alcohol, to which she had lately become addicted through it having been prescribed for the cardiac condition, I regarded as a factor in contributing to the *fætor ex ore.*

While one can understand the tendency to enslavement possessed over its unfortunate victim by alcohol, by morphin, by cocain, and the like, it is difficult to comprehend the employment of these coal-tar analgesics to the extent that a distinct addiction to their use is established, and yet that such is the case there is no doubt, even when their use is acquired other than for the relief of pain.

Luce[2] reported two interesting instances of acetanilid addiction, in which the drug had been originally prescribed for pelvic pain.

The first of these, when seen by Dr. Luce, was hysterical and emaciated; there were recurring convulsions, edema of the inferior extremities, feeble and irregular heart, blueness of the mucous membranes, but pallor of the skin; albumin and casts in the urine. The initial diagnosis was uremia. Later, among the patient's belongings a large quantity of acetanilid was discovered. When the drug was withheld the patient "soon began to exhibit all the traits peculiar to the confirmed morphinomaniac, moral depravity, and the like." She employed every possible means to obtain the drug, attempting even to bribe the nurse and, this failing, the members of the family. Recovery followed under careful treatment, and in six months the patient was well, and had remained so to some months later, at the time of the report.

The second case was very similar. So secret was the habit that the attendant, with whom Dr. Luce saw the case, would not entertain the notion of a hidden drug habit. The use of acetanilid was accidentally discovered, and its withdrawal attended with similar difficulties, as in the other case.

In the interesting case of Stengel and White,[3] under their care in the University Hospital, which in character of blood changes that of mine to be reported closely resembles, concealment of the habit was in evidence, and although the patient's ill-physical and blood condition early aroused a suspicion on the part of Dr. Stengel of some form of hemolytic poisoning, it was only with the greatest difficulty ascertained. The case is briefly as follows:

Miss R., aged 25 years, had suffered from insomnia for five years, resulting from neuralgia, and had been given chloral and other drugs for its amelioration. There had been much gastric disturbance; excessive cyanosis for five years; skin of a leaden hue; emaciation; feeble pulse; rapid weak heart action; cardiac enlargement; systolic murmur heard over the whole precordia; venous hum and thrill in the neck; slight liver enlargement; spleen easily palpable; more or less edema of legs for several years; urine claret colored; specific gravity, 1024; albumin; no glucose; granular casts. Blood examination: erythrocytes, various counts, from 1,860,000 to 3,040,000; leucocytes, 19,800. No methemogoblin or hematoporphyrin discovered in blood or urine (Dr. Edsall).

Acetanilid addiction had been established through taking the drug for neuralgia. The habit was recent and unknown to former attendants. One had regarded the case as valvular disease; another as mediastinal tumor; others had thought the cardiac condition could not account for the cyanosis; while a prominent clinician had diagnosed a tear in the interventricular septum. Through the patient being detected in receiving a package of acetanilid capsules, she finally admitted having been taking the drug in large quantities for some five years, and had continued its secret use in the hospital. On its withdrawal improvement was progressively manifest, save for a few days, when a capsule containing phenacetin was administered—then cyanosis, which had quite disappeared, returned. The signs of cardiac disability soon entirely disappeared, and the patient was finally discharged "practically well in every respect."

I wish now to report a recently observed case of my own, of acetanilid addiction, in which the habit had been formed, not for the relief of pain, but through the drug having originally been prescribed for nervousness and insomnia. The point of special interest involved is the blood condition, the picture of which, if its chocolate hue evident in the earlier examination and the slight leucocytosis were disregarded, would appear that of pernicious anemia, characteristic of the blood condition observed by Stengel in his case (though in the case to be related present in less degree) and as usual in the blood studies made by Ehrlich and Lindenthal, Krönig, and others, in certain cases of poisoning by the aniline derivatives. The case is as follows:

A. F., male, aged 50 years, merchant, had been brought to Philadelphia from a distant part of the state to consult a kinsman, a physician, concerning his progressively increasing ill health, and was referred to me. He had begun to ail about two years before; became debilitated, and lost weight; segments of a tapeworm were discovered in July, and the entire worm was believed to have been voided in October. He continued, however, to decline in health. His stomach had been upset for a long time, anorexia was usual, and frequent vomiting common, on which account lately he had eaten very little, and chiefly liquid food. He felt required to take a small amount of whiskey daily and a very small quantity affected him. His usual weight was 140 lbs., but he had now declined to 116. I was summoned to see him at his hotel on March 13, 1905. He was abed; profoundly debilitated; was stuporous; and replied incoherently to questions. He had stood the journey to the city badly. The skin was of a dusky hue; the mucous membranes were pallid and anemic looking; heart feeble, but free from enlargement or adventitious sounds. Outline of liver dullness slightly increased; spleen not palpable; right kidney loose and easily grasped; inferior border of stomach on the line with the umbilicus.

On the following day he was brought to my office for further examination. His appearance was that of a profoundly ill man. He was apathetic; there was marked mental hepatude, as was noticed the previous night, and so debilitated was he that he could scarcely speak. The heart sounds were much enfeebled, and the pulse at the wrist barely perceptible. There had been a good deal of pain in the thighs and legs, with paresthetic sensations in the extremities; edema was not present; the knee jerks were absent, and only a slight flicker evident to reinforcement; the pupils reacted to light and accommodation; station impaired, but evidently due to debility and not to loss of co-ordination; no tactile loss. Blood which exuded from puncture for examination was of a deep chocolate color; inspection showed poikilocytosis and variation in size of corpuscles. The urine was of unusually high color,

2. American Medicine, Sept. 26, 1903.
3. University of Pennsylvania Med. Bull., February, 1903.

resembling that of Madeira wine or porter, and had a peculiarly fetid, aromatic odor. Interrogation of his wife and himself, elicited the information that for two or more years he had acquired the habit of taking antikamnia, which had been originally prescribed by his attendant for the relief of insomnia and nervousness; that for several years, at least two, he had taken daily some twelve tablets of either plain antikamnia, or of antikamnia with codein, and this custom he maintained to the present, totally unaware of its effect in producing the present condition, which was regarded as the result of the gastric disorder. He had, besides, about a year ago, taken for a while 2 ozs. of somnos at night. This he had not used for a long time. The antikamnia preparation was his mainstay, and the only drug now used. His physician, he said, had discovered glucose in the urine, a year or so before, although the twenty-four hour quantity never exceeded two pints. He himself had noticed the peculiar color and odor of the urine for a long time, and it was so evident when "diabetes" was diagnosed.

March 14:—Urine clear, though very dark brown color; odor peculiarly aromatic, and resembling somewhat that of burnt caramel; acid, sp. gr. 1026; albumin, marked reaction; glucose absent though Fehling's test reduced; bile pigment absent (ether and iodin test). Microscopic examination (centrifuged specimen): few granular and hyaline casts; cylindroids; scattered red blood corpuscles, and leucocytes. It was noted that a specimen should be examined for methemogoblin and hematoporphyrin.

Blood examination, March 14: Chocolate color. Hemogoblin estimation then impossible. Three days later the blood was of normal hue, then hemoglobin, 60. Erythrocytes 2,522,524; leucocytes 9,700. Inspection shows variation in size and shape of erythrocytes. In less than a half-hour's examination (Dr. Ghriskey) of a stained smear, there were seven normoblasts and one megaloblast seen.

Further blood report by Dr. Ghriskey: "Variation in size and shape of erythrocytes; moderate polychromatophilia; stray erythrocytes showing granular degeneration; blood placques notably present; nucleated red corpuscles, normoblasts 407 per c.mm.; megaloblasts 58.2 per c.mm. Differential count of 500 leucocytes: Polymorphonuclear 65 per cent; small lymphocytes 25.6 per cent.; large lymphocytes 9.8 per cent; eosinophiles .06 per cent. During the above count, there were observed 21 normoblasts and 3 megaloblasts. The nuclei of these cells were generally round in shape; only several showed a tendency to segmentation."

March 15, examination of stomach contents: Fasting, took meal of bread and tea at 9:30 a. m.; at 11 a. m. lavage showed but little remaining; at 11:45 a. m. 60 grams stale bread; 250 c.c. weak tea; 30 c.c. removed at 12:55 p. m.; the color and odor of removed contents somewhat that of urine. Total acidity=23; HCl absent to Günzberg.

The antikamnia and the small quantity of whiskey he had been taking were ordered absolutely discontinued, and he was placed in the care of a competent nurse. Daily morning lavage was ordered, and menthol valerianate was prescribed for the control of nausea and vomiting. He was fed every three hours by day and given an abundance of pure water.

On March 17 the blood which exuded from the puncture for examination was normal in color.

Examination of stomach contents March 17: At 9 a. m., ate one roll; one soft boiled egg; cup of tea. At 11:20 a. m., 40 c.c. was easily removed; fairly normal appearing contents, well but unevenly solved; considerable ropy mucus; filtrate light amber; t. a. 64; Günzberg, strong; Toepfer, 45. Good digestion with normal HCl was therefore present.

Urine, March 17: 550 c.c. in twenty four hours; color and odor as previously described; acid, sp. gr. 1022; bile absent; albumin, well marked reaction. Microscopic examination: hyaline casts; cylindroids; scattered red blood corpuscles; and leucocytes. Specimen sent to a chemist for examination as to presence of abnormal constituents, the result of blood disintegration. Under a few days' rest abed; careful feeding; daily lavage; a bitter acid mixture before meals; iron albuminate, strychnia, and digitalin, there was a rapid improvement, and on March 25, eleven days after he came under observation, there was a marked change for the better, and he insisted on returning to his home to direct his business. The heart sounds were now fairly strong; the dusky hue of the skin had much lessened; and the pains in the legs and thighs had disappeared; the knee jerks were slightly evident without reinforcement. He was much stronger. Nausea and vomiting had disappeared; he had a good appetite, and for several days had been able to eat three full meals, with light food between. The urine had become normal in amount, and the peculiar odor had disappeared. March 23 it was 1450 c.c. in twenty-four hours. The characteristic odor was slightly present in this mixed specimen, but not in a single specimen voided two days before.

April 12, eighteen days after his return, in response to an inquiry as to his condition, he replied that he steadily continued to improve, weighed 124 pounds, ate well; was "gaining strength daily," although he slept badly and was nervous at night; and that the hue of the skin was more natural. He was still taking the tonics prescribed, including arsenic, and had not resumed the antikamnia.

It is regretted that the record in this case is not complete in that a spectroscopic examination of the blood was not made, as was contemplated, and that no report is at hand as to the presence of methemoglobin and hematoporphyrin in the urine and the character of the body causing the peculiar odor. These examinations were noted to be made, but the case was seen in the midst of active private practice, and the blood clearing so quickly left no time then to arrange for a spectroscopic examination. The chemist to whom the urine was sent for this examination neglected to undertake it. That methemoglobin was present in the blood, the appearance of the latter at the first examination strongly suggests, and that bodies characteristic of blood disintegration existed in the urine is quite likely. Non-isolation of these is regrettable.

In these cases of severe chronic poisoning by acetanilid[4] and related coal-tar products, the symptoms are usually very similar as concerns progressive mental and physical debility, which later often reaches a high grade. There are cardiac weaknesses, more or less pronounced cyanosis, and characteristic changes in the blood indi-

4. It should be here remarked that the composition of antikamnia, the compound of acetanilid used in this case and that employed in many others in which "headache powder" is the form ingested, is, as is well known, a mixture of acetanilid, citrated caffein and sodium bicarbonate. Various analyses of antikamnia show it to contain approximately 70 per cent. of acetanilid.

cative of the pernicious action of a hemolytic agent. Apart from the usual chocolate hue of the blood so noticeable on puncture, the blood picture, were it not for an almost invariably present leucocytosis, would suggest pernicious anemia. There is a diminution in the erythrocytes, with variation in their size and shape, the presence of erythroblasts often in larger number than is encountered in pernicious anemia, polychromatophilic cells, and of cells the protoplasm of which is undergoing granular degeneration. The blood plaques are usually notably increased. A leucocytosis is common, the increase being, it is reported, usually in the polymorphonuclear elements. There were, however, in my two cases, which were uncomplicated, 37 and 35 per cent., respectively, of lymphocytes. In several cases reported the leucocyte increase may have been influenced by a coincident ailment adding its quota, and this also influencing the relative polymorphonuclear increase. Thus in Stengel's case there was an alveolar abscess, and in that of Hall,[5] bleeding hemorrhoids and rectal fistule; and in Cabot's case, nasal carcinoma. Curiously, in Cabot's case,[6] in which the blood as it stood on the ear presented the characteristic chocolate hue, and in which, therefore, the hemoglobin was not estimable, there was a polycythemia—the count ran over 6,000,000 on one occasion, and the only noticeable abnormalities in the stained specimen were slight poikilocytosis, granular stipping of many of the red cells, and undue fragility of the leucocytes. Erythroblasts were not in evidence. Methemoglobin was easily demonstrable in both blood and urine. The patient's general condition was good despite the evident cyanosis. Such a case might superficially suggest the condition which lately has attracted considerable attention—chronic cyanosis with polycythemia and enlargement of the spleen. Hall, in reporting his case of acetanilid poisoning, called attention to the likelihood of the initial confusion, and laid stress on the presence of characteristic anemia, etc.

1633 Spruce Street.

NEURASTHENIA CURED BY EXERCISE AND FORCED FEEDING.

REPORT OF TWO CASES.

EDWARD LIVINGSTON HUNT, M.D.

NEW YORK CITY.

In the two cases of neurasthenia reported in this article, one patient was treated in a hotel, the other in his own home in New York. They were both treated by the simple method of exercise and forced feeding. These methods were employed at a time when rest-cures, with restricted diet and isolation and sanitaria, were universally employed.

In the first case, all hope of recovery had been abandoned, and in the second, the court had signed the commitment papers. Both patients completely recovered.

CASE 1.—A. B., aged 45, married, father of two healthy children, engaged in business.

History.—As a child he was well, except for the ordinary diseases of infancy; as a boy and youth he was strong, healthy, and in every respect normal. There was no history or indication of any serious or prolonged illness. His father was living and his heredity was good. There was no history of alcohol, tuberculosis or syphilis. During the last year he had been working unusually hard, and had assumed large responsibilities.

Present Illness.—This began about six months previous (October, 1901), at which time he began to be nervous, irritable and depressed. Three months later he was worse, and at the end of two more he had become restless, sleepless and even more depressed. During the last month he developed delusions, became violent, and had to be watched by two attendants.

Examination.—I first saw him April 5, 1902. At that time he presented the general appearance of one suffering from an acute mental disorder of considerable violence. He paced the room, rarely if ever sitting down. His hands were constantly employed. The eyes were wild and restless.

The physical examination was as follows: The man was of slight build, and poorly nourished. The skin was dry and sallow, and the mucous membranes were anemic. The pupils responded to both light and accommodation, but more rapidly and with a greater degree of dilatation than in the normal person. There was a marked tremor about the muscles of the face and tongue. The tongue was dry and coated. The viscera were negative. There was a tremor of the hands. The reflexes were all exaggerated. The voice was normal, as was the speech. The mental condition was one of great depression, distrust and hopelessness. At that time, no delusions were evident. He could not read, he could not play games, and he could not sit down for five minutes at a time. Every ten minutes he was obliged to pass urine, which was pale and of a low specific gravity, without albumin or casts. He ate fairly well. The treatment which he had hitherto been subjected to had largely been of an expectant nature, for he had been confined to the house by the aid of keepers and drugs.

Treatment.—I employed two strong and competent nurses, and at once put the patient on a food and exercise régime, which I shall now describe. The diagnosis, of course, was one of acute neurasthenia.

The day began at seven, when the patient was given a cold plunge, followed by a glass of milk. An hour later he was given a substantial breakfast, consisting of cereal, meat, eggs and milk, of all of which the patient was encouraged to eat heartily. Immediately after this the nurse took him out for a long, brisk walk, of about five miles. The route lay through the resident district toward the suburbs. At 11:30 he returned for a glass of milk with an egg; the next hour was given up to complete rest and relaxation. At 12:30 the nurse tried to interest him in reading or cards, and promptly at 1 a hearty dinner was served. An hour was spent at the table, as there was soup, a roast, several vegetables, dessert, and sometimes more. Neither tea nor coffee was served, only milk and water. At 2, the patient started out to spend two and a half hours away from home exercising. If the weather was mild, he and the nurse played golf, tennis or croquet: if stormy, they bowled or played ping pong. Billiards and pool were suggested, but owing to the difficulty of getting a suitable place, were abandoned. Sometimes they walked. At 5, another glass of milk with an egg was taken. Then the physician called and the patient reported his condition, relating in his own language and in his own way the events of the preceding twenty-four hours. For the next half hour he rested. Promptly at 6, nurse and patient spent twenty minutes in hard indoor exercise, such as punching the bag or playing at handball. A cold shower bath followed, and at seven came a substantial supper, with meat and eggs.

The evenings were devoted to games and conversation. At ten, Indian clubs and dumbbells were brought out, and at half-past ten the patient had a glass of milk and retired.

Course of the Disease.—The régime of forced feeding and exercise was kept up with great persistency and regularity for three weeks. At the beginning, the patient was so very restless that small doses of bromid were administered every three or four hours, and a tonic consisting of iron and strychnia was given after meals. Before meals, one of the glycerophosphates was given in hot water.

At the end of the first week there was manifest an improvement. All the symptoms were less aggravated and the appetite had increased. At the end of the second week, the restlessness had diminished. From then on, the improvement was steady, rapid, and consistent. The patient began to read the

5. Boston Med. and Surg. Journal, December, 1903.
6. Phila. Medical Journal, Nov. 29, 1902.

papers, and slept for two or three hours at night. In thirty days he was much better, and began to complain of the monotony of the régime. Ten days after this he was sent to a ball game and a matinee. These diversions broke the monotony of the treatment. At the end of the second month one nurse was dismissed and the patient began to admit that he was better. From this time on, the exercise was not quite so violent nor so extensive; the forced feeding continued. The patient was steadily gaining in weight. At the end of three months he began to go about alone, desired to see his friends, and attended church. He was still obliged to continue taking a very great deal of exercise, but was allowed to select what he preferred. The appetite was large, and the three meals were not satisfying. In addition, he continued milk and eggs. Throughout the five months he had a nurse, and all that time he was made to eat enormously and to exercise in every possible way, and for several hours each day. At the end of that time the one nurse was discharged. Just seven months after I saw him, the patient resumed his business and was discharged cured.

The second case is as follows:

CASE 2.—C. D., aged 55, spinster. Had always been well and healthy, but had always regarded herself as an invalid.

History.—She never walked, never ate very much, and never took much of an interest in anything. She contracted this mode of living, withdrew gradually from everything, and narrowed all her interests. She became depressed, morose, and "hipped" about herself. Her strength failed, her weight dropped to 97 pounds, and she was in a pitiable condition. It was necessary to have constantly with her two nurses. The pulse became very rapid and the condition of neurasthenia was fast drifting into one of melancholia. Sanitaria were tried without any avail.

Treatment.—I saw her first in midwinter, and after in vain trying sedatives, companionship, etc., I resolved to put her on the food and exercise cure. Two strong-minded nurses were provided, and she began with three slight meals, and three glasses of milk daily. The first day she walked only two blocks. Each day the distance was doubled, and when she had walked a mile the next day she was made to walk two. The feeding was as rapidly increased, so that she took three large meals, a light luncheon, quart of milk and three raw eggs daily. She began to gain weight very rapidly, to become quieter and to sleep. The exercise was then increased, until at its maximum she walked five miles daily. The feeding was almost beyond comprehension, as she took two quarts of milk daily, six raw eggs, and three big meals. She gained twenty pounds and gradually began to take an interest in her surroundings. Her entire time was now spent in eating, walking and resting. Each demanded the other. A cycle had been established, she continued to improve, and by summer was able to go away with only one attendant. The forced feeding was diminished, but the exercise was increased.

Subsequent History.—Nine months after I first saw her she was completely recovered, and is to-day a living example of the value of food and exercise in the treatment of neurasthenia.

71 East Fifty-Second Street.

Diabetes in Railroad Employes.—Navarre of Lyons, France, has been investigating the proportions of diabetics among the employes of the railroad line to the Mediterranean. The *Semaine Médicale* for April 19 summaries his report as follows: The entire number of cases of diabetes reported by the medical officers of the road during the last ten years has been 222, an average of 3 per 1,000. The proportion is much higher among engineers and conductors than among other employes, being 12.63 per cent. per 1,000 among the former and 13.1 per 1,000 among the latter, while it is only 1.76 per cent. among the office employes. During the last four years 723 employes have been retired on account of chronic illness, including 14 on account of diabetes. Of this number 11 were engineers or stokers, while only 3 were from the office force. Navarre comments that these figures suggest that vibrations and jars evidently favor the development of diabetes.

THE DANGERS OF THE DOMESTIC USE OF ILLUMINATING GAS AND THE MEANS OF AVOIDING THEM.*

HENRY LEFFMANN, M.D.

PHILADELPHIA.

The employment of illuminating gas manufactured from coal is about a century old. The original method, exclusively in vogue for many years, was by destructive distillation of soft coal. The operation is simple: The coal is heated strongly in a closed vessel, and the gases produced are cooled, purified and distributed. The impurities of the crude gas are numerous, but of only few types. Ammonium compounds and sulphur compounds are the most objectionable, and much attention has been given to devising methods for their removal, which in well-operated works is satisfactorily accomplished. The purified gas as conducted into the storage tanks consists principally of hydrogen and hydrocarbons, among the latter being methane, ethene and benzene. Some carbon monoxid is also present.

Laboratory experiment and clinical experience have shown that gas made in this manner has not very high toxic qualities. The hydrocarbons and hydrogen are rather negative than positive. They are incapable of supporting life, but are not active poisons. The gas always has a characteristic odor that gives warning..

During the past quarter of a century another method of making illuminating gas has been developed, and on account of its simplicity and comparative economy it has largely replaced the older method. This, so-called "water-gas," is made by forcing steam on hot coal, anthracite or coke. The action is not distillation, but partial combustion; the steam oxidizes the coal to carbon monoxid, and is itself reduced to hydrogen. These are combustible gases, almost inodorous and producing an almost non-luminous flame. In this form the gas is suitable for heating purposes. It is sometimes termed "fuel water-gas." To fit this gas for illuminating uses, it is enriched, that is, impregnated with hydrocarbons from petroleum, coal-tar or common oils.

A striking characteristic of water-gas is its toxic power, due to the large amount of carbon monoxid. As this is without odor or irritant action on animal membranes, it may be breathed for a long while unconsciously. It possesses a degree of free affinity, which causes it to combine with hemoglobin to form a body (carbon monoxid-hemoglobin) that is not susceptible of decomposition by free oxygen. Artificial respiration does not remedy this chemical asphyxia. Indeed, up to the present time, no satisfactory method of combating this condition has been devised.

In matters of this kind the economic features are almost always the controlling ones. In spite of the progress of sanitary science, the general management of municipal affairs and of households is along unsanitary lines. It is known, for instance, that unfiltered surface water is unfit for drinking purposes, yet it is the common source of public supplies. So, in the matter of illuminating gas, the more highly toxic water-gas has replaced the older form; the greater danger has been ignored in consequence of economy in cost. The protests made against its use years ago have been disregarded, and the result has been a steady increase in the number of deaths from gas poisoning. Fifty years ago such cases were rare; to-day they are common. In-

* Read before the North Branch of the Philadelphia County Medical Society, 1905.

deed, so far as Philadelphia is concerned, it is noted that illuminating gas and carbolic acid have replaced, for suicidal and accidental poisonings, the arsenic and laudanum of the civil-war period.

The cheapening of the gas supply, representing a reduction to nearly one-half the cost of old-fashioned coal-gas, has led to its extensive use for heating purposes, more especially for cooking. Most of the apparatus furnished for these uses is constructed with but little regard to sanitary requirements. So far as the heating apparatus is concerned, it is used in about the same manner as our barbarian ancestors used their tent fires, except that the ventilating opening in the apex of the tent does not find any analogue in our own rooms.

The gas stove, for cooking, does not represent so serious a menace to health as does the simple heating apparatus. The former is generally employed in the warmer season, when there is much natural ventilation; the most serious difficulty with it is the striking back of the flame, which causes imperfect combustion, with the formation of offensive and poisonous compounds. These burners are generally constructed on the Bunsen principle, but are not provided with a collar by which the air current can be controlled to adapt it to the gas current. Slight changes of pressure will cause interruption of the combustion, with the result that the flame passes back to the inner jet.

For the heating of bedrooms and bathrooms, now becoming a common practice in cities, apparatus has been designed which, though called "stoves," are merely batteries of burners. They appear to be rather wasteful, since there is little metal to be heated and therefore little radiating mass. They are connected usually by a cheap grade of tubing, that soon becomes brittle and leaky. A special, highly objectionable feature is a stopcock attached to the stove, so that the gas supply can be turned off at that point and the connecting tube still remain open to the flow of gas; if this tube leaks, gas continues to flow out into the room. In this way many accidents to life and to property are caused. The convenience of this lower valve leads to its frequent use. During the past winter I have had considerable experience with these appliances and I have found them more than once leaking so badly that a flame an inch long could be obtained from points in the connecting tube.

The modern water-gas is of such insidious nature that a sleeper can easily absorb a fatal quantity without being aroused. Let us suppose that the condition of the atmosphere is such that at each inspiration 1/1000 of a grain of the carbon monoxid present is absorbed. After the first inspiration, the blood will contain this quantity and the equivalent quantity of hemoglobin will be thrown out of function. At the next inspiration, another 1/1000 of a grain will pass in, but the first portion will remain, so that now 1/500 will be present. At the next inspiration the quantity will be increased to nearly 1/333, and so on.

Hüfner states that 1 gram of hemoglobin will take up 1.3 c.c. of carbon monoxid. Da Costa gives the average of hemoglobin in normal blood as 14 grams to 100 c.c., therefore 18.2 c.c., say 20 c.c., of carbon monoxid would render the hemoglobin of 100 c.c of blood useless; 20 c.c. of carbon monoxid weighs about 4/10 of a grain. From this rough calculation it is easily seen that even a small percentage of carbon monoxid can produce serious poisoning.

It is not appropriate to present the analytical data in detail, but the following table shows the principal ingredients of water-gas and coal-gas and their ordinary percentage by volume. It is taken from a recent edition of Kent's "Engineer's Pocketbook," and is presumably from authentic sources. Natural gas is inserted for comparison:

	Natural Gas.	Coal Gas.	Water Gas.
Carbon monoxid	0.5	6.0	45.0
Hydrogen	2.2	46.0	45.0
Methane	92.6	40.0	0.2
Ethene	0.3	4.0	....
Nitrogen	3.6	1.5	2.0
Carbon dioxid	0.3	0.5	4.0
Heat units per cubic foot	1,000	735	322

It will be seen that unenriched water-gas is principally hydrogen and carbon monoxid, and that its fuel value is rather low. When the gas is enriched, the so-called heavy hydrocarbons, compounds rich in carbon, are much increased, and the fuel value, as well as the illuminating power, is much improved. The following are partial statements of composition of enriched water-gas, such as is commonly supplied in American cities. The figures, except for heating power, are per cent. by volume. Not all the ingredients are given:

	No. 1.	No. 2.
Carbon monoxid	28.0	23.0
Hydrogen	37.0	36.0
Methane	19.0	21.0
Ethene	11.0	13.0
Heat units per cubic foot	650	658

As a comparison of heating power between the two types of gas, the figures given by E. G. Love for 1892 (Kent's handbook), may be quoted: New York City gas (carburetted water-gas), costing $1.25 per 1,000, yielded 715,000 heat units per 1,000 cubic feet. London gas (presumably all coal-gas), at from 60 to 70 cents per 1,000, yielded 668,000 heat units per 1,000 cubic feet.

It would be a great mistake, however, to assume that because of these objections we should abandon the use of gas, or even go back to original coal-gas. The object of this paper is to call attention to the dangers in order that renewed attention may be given to avoiding them. Gas is only dangerous when we lose sight of its composition and effects. Its advantages in the household are great. Properly used, it makes for sanitation instead of against it. At the cooking range, it simplifies very much the details of food preparation, relieves the housekeeper of much hard labor, and saves time, temper and trouble. The facility with which it may be used to obtain hot water at short notice is a great advantage, both to the well and to the sick.

The need in regard to house use of gas is better apparatus and better connection of that apparatus with pipes. Gas producers and sanitary authorities should join hands in enforcing regulations in these respects.

Let me take some of these reforms up in more detail. I suggest that the sale of inferior tubing be forbidden. Excellent rubber tubing can be obtained for a reasonable price. Taking into consideration my own experience this winter, I should say that the higher priced tubing is the more economical for it outlasts by a long while the inferior grades. The inferior grade often leaks when purchased. It is sometimes but little else than an imitation of rubber, its quality being concealed by a brilliantly colored covering. I have seen this tubing become in a short time so brittle that it could be broken like a dry twig.

Gas stoves for heating rooms should not have stopcock connections at the base unless attached by metal tubes with tight joints to the house mains. If attached

by rubber tubes, there is great danger of the gas being only turned off below. This method of turning out the stove is the usual one with women and children, who can not conveniently reach the higher burner. The apparatus, however, should be so constructed as to prevent the rubber tube, even when of the best quality, remaining in free connection with the house main when the gas is not lighted.

Improvements should be made in the room stoves by which a larger radiator effect could be obtained by a given gas consumption. So far as I have been able to judge, the principal heating effect is the distribution of the products of combustion through the room. This, of course, is insanitary and doubly so because the shortness of heat forbids the free opening of windows. I believe that stoves for heating purposes should be placed only where the products of combustion can escape freely to the chimney. It must be borne in mind that the carbon monoxid poisoning is not the only danger in the use of gas. The products of normal combustion are more or less toxic and the products of imperfect combustion are still worse.

All burners on the Bunsen principle should be provided with collars for controlling the air supply, and the dealers in these articles should be expected to instruct purchasers in the use of the collar. The escape of the partially burned hydrocarbons resulting from the striking back of burners is very detrimental to health.

The use of illuminating mantles with gas has become very common of late years, and is a great advantage in several ways. The mantle, however, may interfere with proper combustion. It is not at all uncommon to notice a disagreeable odor proceeding from these burners, and this is usually due to displaced or worn-out mantles. The rubber tube connecting the ordinary drop-light with the house main is apt to be a source of danger for the same reason as noted in connection with the stove; the gas may be turned off for convenience, at the base of the light, instead of at the original attachment, and thus may leak into the rooms.

These points may seem trifling, but practical experience has shown that the dangers exist. A rational co-operation of the makers of gas and gas stoves on the one hand, with physicians and sanitarians on the other, will greatly improve the condition of the air of our living rooms.

The mortality statistics of Philadelphia and New York show strikingly the increase in the poisonous qualities of illuminating gas since the extensive introduction of water gas. Both cities have been extensive users of gas for over 50 years. A report presented in 1854 by the trustees of the Philadelphia Gas Works to City Councils states that during the preceding year 250,000,000 cubic feet of gas had been manufactured. This was, of course, for the old city alone, as the consolidation act was not approved until February, 1854.

Deaths from poisoning by illuminating gas do not occupy a place in the mortality reports of Philadelphia or New York until about twenty years ago.

For New York, I have the figures given by Dr. Witthaus in Witthaus & Becker's "Medical Jurisprudence and Toxicology," and the report of the New York Board of Health for 1902. The figures given by Dr. Witthaus are in summary as follows:

DEATHS IN NEW YORK CITY ATTRIBUTABLE TO POISONING BY ILLUMINATING GAS.

	Accidental.	Suicidal.
From 1867 to 1880, 14 years.....	13	3
From 1880 to 1892, 13 years.....	157	45

Up to 1887 the entries are very few; for the last four years of the second period above given the data are:

	Accidental.	Suicidal.
1889	33	11
1890	36	4
1891	35	19
1892	53	11

The report for 1902 gives:

Suicide by "asphyxia" (hanging and strangulation excluded)	118
Deaths by inhalation of "noxious gases" (not suicidal)	235

As a cause of death, illuminating gas first appears prominently in the Philadelphia reports for 1899, but the board's reports for 1897 and 1898 do not give detailed statements and the sudden appearance of this factor may be apparent only. The data are also somewhat confused by the introduction of an item, "suffocation," without further specification. I have endeavored to secure a little more significance to this by showing the proportion of deaths under 1 year and over 15 years attributed to it. I suspect that a notable proportion of suffocations in adults is due to gas poisoning.

The Philadelphia classification differs considerably under different administrations, and some of the terms used are confusing. It is evident that, although suicide is an important factor in mortality statistics, it is not a cause of death in the sense that pneumonia or yellow fever are.

ABSTRACT OF PHILADELPHIA MORTALITY REPORTS.

Year.	Suffocation—Special Cause Not Given.			Suffocation by Illuminating Gas.		Suicide by Illuminating Gas.
	Total.	Under 1 year.	From 20 to 80 years.	Total.	Under 15 years.	Total.
1893	No entry.	.....	.....	No entry.	.....	No entry.
1894	1	.....	1	.....	.....	1
1895	1	1	.....	.....	.....	
1896	No entry.	.....	.....	No entry.	.....	No entry.
1897	.....	.....	No detailed statistics.	.....	.....	
1898	.....	.....	.....	.....	.....	
1899	27	22	5	16	1	30
1900	23	12	9	5	1	19
1901	62	25	31	1	0	26
1902	42	18	16	7	0	36
1903	50	21	21	29	2	45

MEDICAL EDUCATION.

WITH SPECIAL REFERENCE TO THE SUBJECT OF PHYSIOLOGY.*

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I realize that this subject is not one calculated to arouse very enthusiastic interest among general practitioners; nevertheless, I am firmly convinced that, until the general profession takes a more abiding and discriminating interest in the subject of medical education, American medicine will hold itself open to such criticism, whether just or unjust, as has recently emanated from a lofty source.

In an address on this subject, delivered in 1870, Professor Huxley referred to the "singular unreality" of the knowledge of physiology possessed by candidates who appeared before him. "The knowledge I have looked for," he adds, "was a real, precise, thorough, and practical knowledge of fundamentals; whereas, that which the best of the candidates, in a large proportion of cases, have had to give me was a large, extensive, and inaccurate knowledge of superstructure."

It is my purpose to show, by a few quotations, that much the same state of affairs persists to-day; and now,

* Read before the Medical Society of the District of Columbia, 1905.

as then, as it seems to me, we are forced to the same conclusion, that the "fault must be laid, more or less, to the prevalent system of medical education." I am neither so blind nor so pessimistic as to believe that the past thirty-five years have brought no progress; but, surely, the examples to be cited show that there is still great need of improvement, and I beg to submit that this need of improvement may be demonstrated all along the line, in medical students, medical teachers, medical authors, medical schools and state medical examiners.

To begin with the medical student, I quote from a paper which shows that, while the writer has crammed a few facts, he has an utterly inadequate comprehension of their meaning and corelations.

By reflex action we mean the power of the muscle to respond to any stimulus causing a contraction of that muscle. We have tendon reflexes, as the knee jerk, when any quick, sharp blow is rendered on the knee just over the patella. This reflex action is caused by stimulation of the terminal filaments of the nerve supplied to the various parts, and the impulse is conveyed to the brain center, causing contraction of the muscle. In the case of diseased muscle it will not respond to this stimulus, and we have no reflex action. The reflex action is divided into two groups: first, those acting superficially as on the skin itself, and second, those acting on the deeper layers.

The arteries take the blood from the heart, and from there the blood goes on by way of the smaller arteries to the veins, from veins to venules, to capillaries, and so on. Of course, the flow depends on various conditions which are not asked, but I have given the general course.

Nor is this density confined to the subject of physiology; from the same hand we learn:

An element is composed of the essential part of a substance or compound, or one of the parts. Atom is the smallest part of a compound known from a chemical standpoint. Molecule is a group of atoms held together by a substance, considered in relation to an element. Chemical compound, any compound which is held together by atoms and molecules that act chemically and are composed of compounds. Proximate principle is any organic or inorganic substance acting in a general way.

I give next a few quotations from medical authors and teachers, all published within the past three years. While I must confess that the first is hardly fair, I can not resist the temptation to share the joy I had in reading a book which came to me with a note stating that three prominent schools of a neighboring city "are ordering the work regularly." I have no doubt that this is the fact, the work is positively grotesque, but I fancy it is scarcely used as the author would wish to imply.

Dialysis is a theory advanced, concerning which, we believe, the lymph and blood each interchanging their contents, the blood gives through this lining membrane nutriment and the lymph baths [sic!] the tissues with it; then the lymph, in return, gives its waste products (given up by the tissues) to the blood. *Osmosis* is the same theory. However, most physiologists think these changes are brought about by the vital act of the cells themselves. This process of interchange between the lymph and blood takes place through the capillary walls, which are semi-fluid cells with a high function. The blood gives more than it receives from the lymph.

This is, as I have confessed, a huge joke, though it was not so intended by its author. The next, however, is no joke; it is taken from a much more pretentious book, highly commended by no less an authority than THE JOURNAL of the American Medical Association.

Latent heat is the quantity of heat that must be communicated to the body in a given state to convert it into another state without changing the temperature.

We can hardly stop for more quotations from this author, whose pages are filled with grammatical errors which would put a high school student to the blush. One other illustration, however, which marks the lack of attention to current physiologic literature and a failure to appreciate the bearings of research. It is taken from another author and, as it is somewhat technical, perhaps a word of explanation may be pardoned. One of the most interesting features of the functional activity of the cardiac musculature is the initiation and conduction of the contraction wave. We have long been befuddled by a more or less vague discussion of the automaticity of the heart's action and the intracardiac nerve mechanism. From researches which have long been published it would seem that the nature of the stimulus is chemic, depending on the inorganic salts in solution in the blood and especially those of sodium, calcium and potassium, that the most irritable tissue is that at the roots of the great veins, that the contraction starts here and sweeps by direct muscular continuity over the auricles and thence to the ventricles. The direct muscular continuity between auricles and ventricles was shown in 1883, in 1892, in 1897 and again last year, yet we find, in a text-book just published this year, this bald statement:

The fibers of the auricles are, however, quite separate from those of the ventricles, the bond of connection between them being only the fibrous tissue of the auriculo-ventricular openings.

These illustrate perhaps only minor defects, many of which may be rectified in a subsequent edition; yet, they undoubtedly increase the difficulties of the teacher who finds his students becoming dissatisfied with books which seem to need such constant and frequent amending. But the greatest defect I find in many of our books is that they are illogical in arrangement, uneven in development, careless and inaccurate in statement, with a strong tendency either to a too full and exhaustive treatment of certain subjects and a slighting of others, or, on the other hand, to such a fragmentary and disconnected statement of physiologic facts as makes them mere cramming machines.

Turning now to the medical schools, the question is more difficult and, for me, still more delicate. Since the days of Hippocrates, Galen, and Sylvius, "medicine, the most difficult of sciences, the most laborious of arts," has been recognized as resting on the tripod of anatomy, chemistry and physiology. Without the information as to structure, composition and function which these several branches of knowledge contribute, the attempt to cure the ills to which flesh is heir is hopeless empiricism. Though the importance of these so-called fundamental branches, the "institutes of medicine," was thus early recognized, not even yet have they been fully differentiated. In spite of the modern tendency toward specialization, a glance at the catalogues of our multitudinous medical institutions will show that, in many instances, the scientific and the so-called practical branches are combined under one chair. The reasons for this are not far to seek, while the rule is not absolute; the tendency to such combinations is more evident in the smaller, unendowed schools.

The objections to such combinations are, perhaps, more easily stated than supported. Nevertheless, it must be obvious that the sum total of human knowledge, in any one of these branches, is so vast as to tax to the uttermost the capacity and resources of any one man. On the other hand, it is equally obvious that the practi-

tioner, whether of medicine, surgery or what not, if he be imbued with the truly scientific spirit, is more keen to recognize the direct and practical application of scientific facts and principles than is the mere specialist, the theoretical anatomist, chemist, physiologist. The day has not yet passed when connection with the teaching staff of a medical institution is recognized as of no little pecuniary advantage to the practitioner. Aside from the direct advantage of incidental dividends, fees and more abundant clinical material, there is the indirect advantage, often still more remunerative, of consultation work—the prestige of the college professor is admitted. Where these positions are sought and held for such purely commercial advantages, the effects must be pernicious on all concerned, practitioners, patients, students, and schools. But—all such unworthy motives aside—consultation honors do not fall equally to all members of the staff. While the surgeon, the internist, the pediatrist, the obstetrician, etc., are much sought after, the anatomist, the chemist, the pathologist and the physiologist are seldom called on for their special knowledge of these subjects. True, the anatomist may be a successful surgeon and the chemist and pathologist consultant analysts, but there seems no call for the physiologist even as a diagnostician. Moreover, in these days of insistent demands for laboratory training for the students and research work for the teachers, no man can hope to give proper supervision to these departments and at the same time build up a living practice; one or the other is sure to suffer in the effort. This fact is recognized in many of our schools to-day by giving the anatomist, the chemist, the pathologist and the physiologist independent incomes, so that they may devote their whole time and attention to laboratory, library and class-room work. In these schools also we find the tendency more and more marked to teach these subjects intensively, and to arrange and apportion them in the medical curriculum with greater attention to sound and logical pedagogic principles than ever before. These indications are hopeful and progressive, but there is a dark side to the picture.

What shall we say of the schools which carry the lame, the halt and the blind among the student class up to their final examinations for the degree, with unsatisfied conditions in the fundamental branches still adding to their gross weight? Here is a man who has managed to worm through an examination in surgery, but is still conditioned in anatomy. It is too great a pity to "disgrace" him by turning him back, so he is coaxed and he is coached, and, again I quote Professor Huxley, "he works to pass, not to know—and outraged science takes her revenge—he does pass and he does not know!"

Of ten well-known and justly-famed institutions communicated with on the subject of conditioned students, only five compel each man to leave no bridge untaken in his rear, but to enter the next with his records clear. This is, I know, a debatable question. There are often incidents and accidents, which prevent a really worthy student from finishing up all the work of a given year by the close of the term; but the privilege of carrying conditions into the next succeeding year should be guarded and hedged about most closely. I am convinced that, more often than not, a real injustice is done to the student through a mistaken sympathy for his shortcomings. Give the student body to understand that there is a time for all things, and see to it that all things necessary be done in that time. The worthy will respond to a man, the unworthy had "better bide a wee."

One other item with regard to the medical curriculum which it would seem to-day must be regarded as an obsolete method of medical instruction, and that is what has been referred to as "the contemporaneous pursuit of a multiplicity of diverse studies." How can we regard that as "graded course" which, at the same time and place and in the same subjects, groups together students of the first and second, or of the second and third years? Perhaps third and fourth year students may, with advantage, attend the same clinics at the same time, but even this is questionable.

With the establishment of state medical examining boards was brought about the divorce of the degree-conferring from the license-granting power. The cause which led up to this measure was undoubtedly the inefficiency and commercialism of many of our medical institutions. Their diplomas were no longer acceptable certificates of proficiency and the great public demanded some further test of capacity and ability before entrusting its vital interests to the recent graduate. Yea, more, this same great public has clothed these state boards with such power and authority that when the boards pipe we, of the schools, must needs dance. But, how have they been constituted and how have they fulfilled their function? On the whole, well and nobly; yet here and there we have evidence of too much politics, too little comprehension of what is best to be done and how best to do it. From the far West we have learned of scandalous favoritism and gross misconduct in the examinations; and here, in the East, examination questions have leaked out in ways that were dark and by tricks most peculiar.

A recent development in state board activity has been the serving of notice on all colleges that they must come up to a certain standard medical curriculum, or—shut up! For that is what it means, practically; no school could long afford to have any state board say "We will not recognize your graduates as candidates for licensure." This effort to secure a minimum standard of medical education is most praiseworthy and timely. No reasonable reciprocity in state medical licensure can be secured otherwise, but if each one of forty odd states is to set up its own standard, regardless of the others, we will have confusion worse confounded. It is a pleasure, here, to pay tribute to our fellow-member and ex-president, Dr. George M. Kober, for his efforts toward bringing order out of this chaos.

If one might be permitted to criticise the questions propounded by such august bodies, I would suggest that many of them are tests rather of the candidate's memory than of his knowledge. They recall the distinction, made by Professor Huxley, between the teaching of the facts of a science as instruction, and the teaching it systematically as knowledge, a distinction to which I shall have occasion to refer again. Another criticism might be that what is needed is a test of the candidate's knowledge of anatomy, chemistry and physiology, as applied to medicine, not as abstract sciences; but this criticism would revert to the schools for, unfortunately, these subjects are seldom so taught.

Certain of the state boards admit undergraduates to an examination in anatomy, chemistry and physiology on completion of the second year of the medical course. The argument has actually been advanced that at the end of the fourth year they have forgotten these sub-

jects! Surely, the legitimate conclusion from these premises is that the practitioner of medicine has no need of them; and, the next follows close on the heels of this, that these subjects might be dispensed with altogether. Why burden the student with them at all? Is it not a significant coincidence that in one state where this custom prevails a medical school has found it necessary to turn its fourth-year students back for a course in physiology with the second-year men? I am free to admit that, as these subjects have been taught in the past and as, I fear, they are still taught in some places, the student would not lose much if they were abolished. But what a commentary it is on our methods of instruction! Is there any wonder that quackery should be so rampant among us? On the one hand, a public disgusted with and distrustful of these mislabeled "doctors of medicine," on the other a lot of poor, ill-treated ignoramuses who easily drift into the lines of least resistance and find a temporarily profitable outlet for their little accretion of quasi-knowledge in preying on their still more ignorant neighbors. Is there not a really causative relation between the poor cultivation of the medical schools of the past and the mushroom-growth of the innumerable "pathies" of the present? Of all the latter it may be said—as Oliver Wendell Holmes said of the one—"What [in them] is new is not true and what is true is not new." Was the influence of mind on matter, and its applicability in the healing art, unknown before the advent of the Bostonese high-priestess? Had we not known a little, and availed ourselves more, of the benefits of rubbings and movements of various sorts before the day of the osteopath?

If all these things be true, and I think the evidence submitted is at least suggestive, there is still room for improvement in our methods of medical education. The public is to-day more intelligent and more discriminating, more generally informed as to progress in our art and science than it has ever been; and I say this in spite of the widespread commercialism, charlatanism and quackery with which we have been infected. Witness, the large endowment of hospitals, institutes, and laboratories for medical research. The economic value of progress in preventive medicine has been signally marked in our island possessions and is even more strikingly demonstrated in the hospitals and camps of the Japanese army. The problems there dealt with have been solved only by men of wide information, broad culture and deep learning. We must turn out more men like these and even larger.

To return to the more specific part of my subject, what may we gain by the study of physiology? First, there are certain facts with regard to the workings of the economy, demonstrable by experimentation and observation. From these facts we may deduce the fundamental laws and principles underlying them. By repeated experiment and comparison by altering the conditions attendant on the various phenomena, we may further upbuild and establish these laws and principles, we may so weigh and balance and value the contributing factors that we can foretell the effects of subactivity or superactivity of any one of them. We have, then, in the study of physiology a training of the memory, but what is of vastly more importance, a training and development of the powers of observation and of logical reasoning; a recognition of the true relation between cause and effect. In the more modern laboratory course we have, still further, an opportunity for the cultivation of operative skill and technic. Surely, this is a most essential and practical preparation for dealing with the many problems which daily confront the practitioner.

It must be evident that instruction in physiology should be preceded by instruction in anatomy and chemistry. We can get no clear, comprehensive knowledge of organic function until we understand the anatomic structure and relations together with the chemic constitution of the components of the organism. More than this, no student is prepared to take up intelligently the study of physiology until he has thoroughly mastered the principles of physics. How can we understand the circulation of the blood and lymph without a knowledge of the laws relating to liquids? Or how can we understand the process of respiration until we are familiar with the laws of gases? The laws of motion and of moving bodies are as necessary to an understanding of the movements of the skeleton as are the laws of heat, light and electricity necessary to an understanding of other functions of the body. As has recently been remarked, the comparatively new science of physical chemistry has almost revolutionized our ideas of physiologic problems. Our knowledge of osmosis and electrolytic dissociation has given us a much clearer conception of the process of absorption and the action of various chemic substances in the body.

As a matter of fact, the average student comes to his medical studies with too little preparatory training, with an inadequate store of facts and little or no knowledge of method; and, to some of us, he comes too young to appreciate the responsibilities of the work he has undertaken. A course in physics, chemistry and biology, with comprehensive laboratory work in each, should be demanded of every medical matriculant, and this demand should be, not merely on paper, but fortified by an examination to test the efficiency of the qualifications claimed. In the present overcrowded state of the medical curriculum, courses in general chemistry and physics are out of place; we need all the time thus filched from us, by laxity as to preliminary requirement, for courses devoted to the application of these sciences to medicine.

As to the method of teaching physiology, while I am heartily in favor of a comprehensive laboratory course in this branch, I doubt very much whether it be either practicable or advisable to do entirely away with the didactic lecture; but this should be supplemented by frequent recitations, quizzes, and conferences, everything and anything which will bring teacher and student in direct personal contact. With regard to the presentation of the subject, a recent able critic[1] of a current textbook is quoted with most emphatic approval:

> Teachers of physiology should concern themselves with the matters of fundamental importance in their science—the matters that determine the direction in which physiology is developing—because these matters are in the end of as great, if not greater, practical importance to the student of medicine as the well-established familiar facts in regard to the more manifest workings of the circulatory, respiratory and other systems. Teachers of physiology must beware lest they in their efforts to be "practical" cease to be scientific, and thus fail to instill in their students that scientific spirit and interest which physiology is sure to call forth when its study is properly conducted, namely, from the investigative rather than the dogmatic point of view. Physicians sink quickly into the slavery of routinism if not animated by a spirit of inquiry, of criticism, of independent judgment. And how are such qualities to grow in our medical students if

1. THE JOURNAL A. M. A., Oct. 29, 1904, p. 1324.

they are to be denied the stimulus that comes from the study of the living, growing part of sciences of such fundamental import as physiology?

One word more, and I am done. I have recently been asked my "opinion on the subject of a department of applied physiology." I have replied that I am heartily in favor of it. I would put it in the fifth year of the medical course—such as Cornell is planning—and I would place it in charge of a man who has had sufficient experience in general practice to know, not merely to theorize on, the applications of physiology; more than this, I would give him a place on the general staff of the college hospital and require him to demonstrate both normal and abnormal physiology at the bedside. Ultimately, such opportunity and training would develop the physiologist as a diagnostician. The state boards would be less inclined to scale down the value of an examination in physiology to 50 or 70 per cent., as has been done in some places. And the thus demonstrated practical value of this scientific branch of medicine would more clearly justify the expense of modern physiologic laboratory equipment. The field is vast and the fruits already gathered are by no means insignificant. But for applied physiology the surgeon could not operate for the relief of a localizing cerebral lesion, nor could he have warning of an impending intestinal perforation save through blood-pressure observations. The general practitioner and the specialist in nerve and mental diseases would be lost without a knowledge of spinal reflexes. Indeed, about all that we can do, in disturbances of the nerve and vasomotor systems, is the resultant of applied physiology.

With full appreciation of the dangers of dogmatic assertion, I venture to suggest a few of the remedies for the conditions here outlined:

1. Our standard of preliminary education should be raised, and entrance examinations be made more general and more stringent. No student should be advanced to a higher grade until his thorough mastery of the fundamentals has equipped him for an appreciation of their practical bearings. University registration statistics show that the schools which have already effected this are thronged with students.

2. The courses offered in the so-called scientific branches, whether by text-books, by didactic instruction, or by laboratory training, should be at the same time both more scientific and more practical. There is no necessary conflict here, for, after all, "science is nothing but trained and organized common sense."

3. Medical schools should quickly recover their birthright, which they sold for a mess of pottage. It is to their shame that much of recent progress toward higher medical education has found its initiative, not with them, but with the state examining boards.

4. The elevation of our professional standards is a duty which we owe to our patients, to each other, and to the public; its accomplishment will be the full fruition of the high ethical spirit which animates our guild.

1815 Belmont Avenue.

The Hairpin in Emergencies.—The hairpin of domestic life may in emergencies be put to a variety of medical uses—as an esthesiometer, a probe, a wire for fractured bones, a cauterizer, a harelip pin, a tenaculum, a nasal or aural speculum, a wound retractor, an aneurism needle, a tracheal retractor, for drainage, as a female catheter and a wound approximator.—*Medical Times.*

CONJUNCTIVAL IRRITATION EXCITED BY PROXIMITY TO A HORSE.*

WILLIAM CAMPBELL POSEY, M.D.
PHILADELPHIA.

A number of years ago I was consulted by a banker from one of the New England towns, on account of a high muscular error, which occasioned marked asthenopia. During the treatment of the case, it was elicited that in addition to the symptoms of eyestrain, the patient was the subject of a peculiar kind of inflammation of his eyes, which occasioned him great annoyance and distress, and from which he despaired of obtaining relief. This affection, as told in his own words, was as follows:

CASE 1.—Since I was 30 years of age, whenever I drive behind a horse, I usually begin to sneeze somewhat during the first mile, but by the end of the second or third mile the sneezing gradually increases until I sneeze once every 100 feet. If the drive is a long one, the sneezing may relax somewhat for a time, only to recur, however, with the same vigor. During this time the eyes are watery and weak, the lids become much swollen and the eyeballs red; the inside of the lids is also discolored, and my whole appearance is that of a person who has been on a very bad spree. After a night's rest the eyes look as well as ever. The time of year has no influence on the irritation, the symptoms appearing in both summer and winter. I thought for a time that the dust raised in driving might have something to do with it, but then I noticed that it was just as bad after sleighing. Then, too, in recent years I have found that, no matter how dusty the road might be, the symptoms were never provoked if I rode in an automobile. I have suffered just as much in the White Mountains as at home, and climate seems to make no difference.

The trouble is greatly aggravated by rubbing my eyes or even by bathing them in warm water, so that I have learned to avoid touching them, as far as possible, after driving. I have had the same symptoms, though not nearly so bad, after stroking a cat, and if I put my hand to my face directly afterward the irritation is much aggravated and I feel tired, "headachy," and as though I had a cold. So far as I know, no other members of my family have been similarly affected, though repeated attacks of sneezing have always been a family trait.

I have never had any treatment which could control the symptoms.

Some time after this, I was consulted by a lad, aged 10 years, who was suffering from an attack of simple conjunctivitis, which he said had been excited by driving in the country.

CASE 2.—It was elicited that driving, or even approaching a horse in the stable, always caused his eyes to water and itch so badly that he was compelled to hold a handkerchief up to them, though he could ride in an automobile without discomfort. He was a subject of hay fever and was compelled to go north in August and September to escape the annoyance of that disease, but even in Maine or in the Adirondacks, whenever he would drive or come near a horse, the irritation in the eyes and nose would reappear.

Examination.—Inspection showed both the bulbar and tarsal conjunctiva to be swollen and injected, and the follicles enlarged. Lachrymation was profuse and the edges of the lids were covered with mucus. Unfortunately no bacteriologic examination was made of the secretion at the first examination, and, as the usual local treatment for conjunctivitis caused a rapid subsidence of the symptoms, when the patient was seen a second time, a few days later, the inflammation had almost entirely disappeared.

Subsequent History.—The patient shortly afterward removed to a distance, so that I have not had an opportunity

* Read before the Section in Ophthalmology of the College of Physicians of Philadelphia, 1905.

of observing the case further, but a letter was recently received from him from Pomfret, Conn., where he is at school, saying that the same peculiar irritation of the eyes and nose is still excited by the proximity of a horse, though in recent years his hay fever has caused him but little annoyance.

Three years ago, I had an opportunity of obtaining the notes of a third case, that of a physician, but as I made the acquaintance of this patient at sea, on a trip to Europe, I had no opportunity of examining the eyes while they were in a state of irritation. A letter directed to him a short time ago brought the following response:

CASE 3.—I am still suffering from the horse. I felt fine this morning when I started out to visit my patients, but had not gone but a few feet when my nose began to run and my eyes to itch, so much so that I have used up four handkerchiefs and had a strong desire to rub my eyes out. This evening I feel tired, "headachy," and as though I had a cold in my head, and it is hard for me to breathe. Now, this has been my daily experience since the snow came. Previous to that time I had done my work in an automobile and never felt better in my life and never thought of my nose and eyes. Two of the coldest days we had, when the thermometer was a few degrees below zero, I had very little trouble, but as soon as the weather moderated a little my trouble began, and now I am hoping for rain to come and take the snow off so that I can take up the automobile and once more be happy. My eyes become red, just as in an acute conjunctivitis, and my nose runs continually and it is hard to breathe through it. It seems to make no difference as to the time of the year nor where I am; if I go into a stable or near a horse I have to sneeze and blow my nose and rub my eyes, on account of itching. When we were in Lisbon (Portugal) this summer we went out to Mafra and Bathalla, where we had to ride some 16 miles. After going but a short distance, I had the same symptoms and it took me some days to get over the effects. Also in Granada, in driving from the hotel to the railroad station, I had a bad attack. We arrived home in October, and a few times during that month, when the auto was out of order, I had to take a horse for a few hours, but always with the same uncomfortable effects.

After a rather careful search through the ophthalmologic literature which might bear on the subject, I was unable to find any reference to this peculiar form of irritation of the conjunctiva, but a rhinologic friend, Dr. W. J. Freeman, told me that the action of emanations from animals on the respiratory tract had been long recognized and that it is a matter of not infrequent observation that attacks of asthma may be excited by the proximity of a cat or other animal. Mackenzie[1] says:

Some people experience symptoms somewhat analogous to those of hay fever from smelling certain fruits, whilst others are troubled in the same way by the presence of cats, rabbits and guinea-pigs, and Bastian[2] suffered from an affection closely resembling hay fever in dissecting the *Ascaris megalocephala*, a parasite which infects the horse.

Zamiko[3] and Heymann[4] attribute the inflammation of the mucous membrane in these cases to an irritation of the olfactory nerves, others to direct microbic infection. In a paper read before the Seventh Annual Meeting of the American Laryngological, Rhinological and Otological Society, Dr. H. Holbrook Curtis[5] said that in a previous communication he had cited a case in which a man had been unable to live in London since twelve years of age, as he could not pass a horse in the street without having a dreadful coryza. Many specialists in London had experimented with this patient and it had been found that he could ride behind a horse that had been vaselined without the symptoms developing until an hour later. Dr. Curtis added further that some subjects are sensitive to emanations from elephants, cats and mice, and said that he knew several opera singers who were unable to sing after being exposed to such emanations in a room. In a personal communication made to me within the past few days, Dr. S. Wier Mitchell said that in a research on cat fear which he is making, he had come across many cases of conjunctivitis caused by the nearness of cats. In one case, in which he was particularly interested, the ocular symptoms arose in a family where nearly all the members had some means of telling when a cat is present, even though unseen and unheard. He had known of two other persons who had conjunctival symptoms excited by coming near horses; one of these suffered invariably in driving behind a horse, but escaped entirely when mounted on horseback.

The nature of the conjunctival and nasal inflammation which is excited by these animal emanations is, as far as I am aware, unknown, although it would appear that it possesses some association with hay fever. That the process in the two conditions is not identical, however, is indicated by the fact that two of the three cases which have just been reported were not subjects of this disease. It is to be regretted that no bacteriologic study was made in the case which I observed at the time of the attack, though it is probable, from the unsatisfactory results obtained from cultures of the nasal secretion in hay fever, that the findings from the conjunctival secretion in this case would have been negative.

It is of interest, in this connection, to note the observations of Kyle regarding the etiology of hay fever. This investigator is persuaded, after making a series of examinations of the saliva in certain individuals afflicted with hay fever and those not so affected, that in some cases the causes, direct or indirect, of local irritation in the nasal mucous membrane are brought about by chemical change in the constituents of the secretions of the mucous-secreting glands. With a system so predisposed chemically, the contact of a pollen or of an irritating salt like ammonium, is sufficient, by provoking the flow of secretion from the mucous membrane, to precipitate an attack of local inflammation. Dr. Kyle has recently written to me that he has seen a number of cases of nasal and conjunctival irritation excited by animals, in which the symptoms were almost identical with those of hay fever, and in nearly all of which the secretions showed an excess of the ammonia salts. While this theory explains the cause of the susceptibility of certain individuals to affections of the mucous membrane, it does not designate the nature of the agents which excite the irritation, so that it is impossible, therefore, at this time, to do more than conclude that the irritation of the conjunctiva in the class of cases under discussion, is occasioned by a peculiar individual susceptibility to certain substances, chemical, bacteriologic or otherwise, which emanate from the horse.

1. Text-Book on Diseases of Throat and Nose, vol. ii, p. 307.
2. Med. News, Philadelphia, April 17, 1883.
3. Die Krankheiten der Nase, p. 257.
4. Die Nase, vol. iii, p. 67.
5. The Immunizing Cure of Hay Fever.

THE ETIOLOGY OF CHOROIDITIS.*

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The following observations regarding the causal relations of choroiditis with rubeola are the results of observations of numerous cases of this disease which have come under my observation. It has always seemed to the writer that the pathology of choroiditis has not

* Read before the Florida State Medical Association, 1905.

been so definitely established or defined as to enable the practitioner to feel that he has at his command any remedy on which he can rely with definite expectation as to good results, and, in the majority of cases treated, the result has been either partial improvement, a negative result, or gradual loss of vision.

In standard works on ophthalmology, the following causes of choroiditis are mentioned: eruptive diseases, syphilis, rheumatism, dysentery, meningitis, thrombosis, and infection by pyogenic organisms; the three last named causes are probably sequelæ of other diseases. Exposure to light is also mentioned as a cause, to which may be added traumatism.

The following case report suggests an infection of the deeper ocular structures following an attack of rubeola:

Patient.—F. L., a white boy, aged 7, previously in good health, passed through an attack of rubeola, which terminated Jan. 25, 1899, his vision remaining good up to January 31.

Examination.—On February 1 he was found to be totally blind. Ophthalmoscopic examination showed choking of both optic discs and obscurity of blood vessels, with areas of inflammatory exudate scattered through the fundi of both eyes, a typical picture of choroidoretinitis. V. O. D. = O; V. O. S. = O.

Treatment and Result.—After treatment by mercury and potassium iodid, followed by strychnin, by February, 1903, V. O. D. = 20/100 +; V. O. S. = 20/30 +. Ophthalmoscopic examinations showed evidence of marked choroidoretinitis, with atrophy, pigment patches and the other sequelæ of choroidoretinitis. Vision was not improved by glasses.

This is one of many such cases that have fallen under the writer's observation, and it is to this so-called benign disease, rubeola, as a cause of choroiditis, that I desire to direct attention, not to speak of the many other serious ills that follow in its wake.

Physicians who have treated many cases of rubeola have noticed the severe complications involving the lungs, intestines and other viscera. In connection with this, the question naturally arises as to how it involves the deep structures of the body. Knies, in his work on the eye in general diseases, states that optic neuritis, with consequent blindness, may occur from meningitis as a complication of rubeola. Stack, quoted in Knies' work, describes cases of hemiplegia and hemianopsia as sequelæ of rubeola, also keratomalacia. Seeking for the channel of transmission by which infection could reach the eye, we naturally turn to the blood vessels. We find that Knies also speaks of endocarditis as a result of pyemia leading to hemorrhages, thrombosis and abscesses. He states that, as a result of rubeola, numerous ecchymoses are to be found in the conjunctivæ and retinæ, and that there is also congestion of the optic nerve. Numerous capillary emboli and miliary abscesses are also to be found in the optic nerve. Again, Knies states that the affections which may occur with infectious diseases may be summarized as follows: Hemorrhages in peripheral and central visual apparatus, foci of fatty degeneration in central organs, inflammatory changes in blood vessels (endarteritis), iritis, cyclitis, choroiditis or neuritis. While choroiditis frequently invades both eyes, it has been my observation that, following the rule incident to the dual life of man, by which, while one side may be entirely incapacitated, the other will retain its life and usefulness, this disease is apt to attack one eye, leaving the other entirely intact, or to affect one eye to a slight degree only. It has been shown that rubeola has been followed by hemiplegia or hemianopsia, and that as a result of the infection endocarditis and endarteritis may occur. These conditions may extend into the capillary terminals of the vascular system causing the thrombi, miliary abscesses, etc., previously mentioned, and such conditions are evidently most likely to attack or to make the most decided impression on only one side.

The frequent unilateral attacks of choroiditis may be compared with hemianopsia. If the lesion involved the tract there would probably be choroiditis on both sides involving the nasal or temporal side of the fundi, as in hemianopsia, depending on the involvement of the right or left optic tract or chiasm and necessarily associated with hemiopia; inasmuch as this is not the case, the disease is probably in the vascular system and dependent on endarteritis, obliteration of small blood vessels, and later, atrophy. These conditions of primary congestion and inflammation, followed by secondary atrophy and dislocation of choroidal pigment, is the condition which is usually treated with such remedies as potassium iodid and mercury, jaborandi, sweating, etc. These the writer has used, but the results obtained have been unsatisfactory. On the contrary, he has felt that the integrity of important viscera, especially the stomach and kidneys, has been jeopardized by the large doses used in the effort to cure the disease. If these drugs be valuable at all, he believes they will be most so in the early stages of the disease before atrophy has begun. It is to be hoped that good will come in the near future from the immunizing or curative properties of antistreptococcus serum in cases of rubeola. Until such time as a remedy or preventative agent can be found, it is desirable that rubeola be placed on the list of dangerous and destructive diseases, with the same quarantine regulations applied to it as to scarlatina, diphtheria, etc.

THE APPLICATION OF ICE IN LOBAR PNEUMONIA.

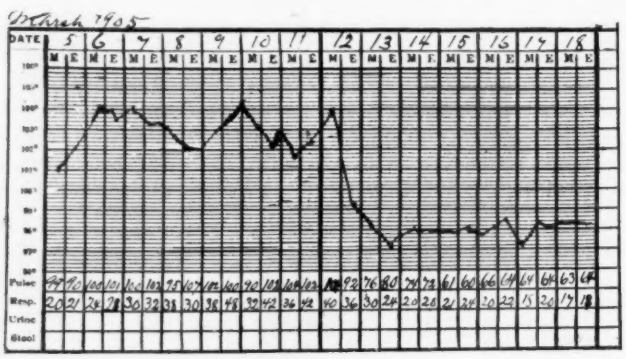
P. A. AURNESS, M.D.
MINNEAPOLIS.

It may be of interest to report a line of treatment of lobar pneumonia that I have carried out for a number of years with no deaths.

The treatment may be outlined as follows: As soon as a diagnosis of lobar pneumonia is made, the patient is given a full warm bath, for cleansing purposes, put to bed and given a laxative dose of calomel and soda. A systematic, routine examination and recording of the general condition of the patient is followed by a careful examination to outline the chest area of the lung tissue involved. This being noted, one or more, as the case may demand, specially constructed ice bags are moderately, but evenly filled with crushed ice and applied so as to accurately cover the chest surface of the parts inflamed. Each bag is wrapped in a thin layer of gauze, and is kept in place by a broad chest binder, while the distal end of a drainage tube, attached to the lower part of the bag, is placed in a basin below the patient's bed. The ice bag is made from a soft, but substantial quality of rubber, shaped to fit in under the axillæ, with a smooth posterior wall and having an airtight screw-top cover to close the filling opening in the front wall. The main and important feature is the arrangement for securing drainage of the water from the melted ice as fast as it is formed, thereby establishing a constant and uniform ice application and utilizing the remarkable heat-absorbing quality of melt-

ing ice, which, it will be remembered, is 80 times greater than that of ice cold water, measured by a calorimeter in centigrade degrees. That is to say, given equal weights of ice and of ice cold water, it will take 80 calories or heat units more to melt the ice than it takes to raise the temperature of the water one (1) degree. This explanation is made in order to understand fully the importance of draining the water in an ice bag, inasmuch as ordinary ice bags soon after being applied render only the service or effect of ice cold water.

In using the drain ice bag, there need be no fear that the vitality of the parts so covered, on account of such increased cooling effect, can be destroyed or damaged for the simple reason that a process of liquefaction of the ice is taking place and not one of freezing or reduction of the body temperature below the freezing point, as might be the case were freezing mixtures applied (as salt and ice—1 to 2). These facts being the basis for the construction of drain ice bags, their use in lobar pneumonia up to the approach of crisis has been adopted in the way described and with the further instruction to the attending nurse, that the ice application must be carried out as faithfully and conscientiously as the administration of any drugs. She is instructed to see that each bag—sometimes as many as seven bags are required—is kept moderately filled and accurately replaced and that no obstruction to the free discharge of



water takes place, and that the bulk of air is forced out, thereby making the pressure of the outer air hold the ice in any desired thickness in the collapsible bag. Morning and evening examinations of the patient are made and the ice application is adapted to correspond to any increased inflammatory area. Should the pulse at any time cause anxiety by increased rapidity, etc., a drain ice bag is also placed over the cardiac region, usually alternating two hours on and off as long as is considered necessary to calm and to strengthen the heart. Headache and delirium are quieted by applying a similar ice bag to the head. Occasionally, when high temperature is persistent, cold spongings are added.

The ice application is kept up continuously as long as the patient's temperature, pulse and respiration indicate that the disease is progressing, and as long as no threatening signs of collapse make their appearance, in which case of course all ice application is promptly removed and such stimulation resorted to as may be required, consisting of increased doses of brandy, strychnin or digitalis, till conditions have improved or till crisis has occurred. The internal medication during the whole course of the disease besides the required stimulants, includes liberal doses of some mild alkaline mineral water, from 4 to 6 glasses a day, and creosote carbonate every 4 hours in doses ranging from 5 to 15 drops. The bowels are kept open with saline laxatives and saline enemas. The diet is guided by the capacity of the digestive apparatus. Proper ventilation of the sick-room is maintained with an upper window open more or less all the time.

Such, then, has been the treatment given to more than a hundred cases of lobar pneumonia with no deaths and without complications to retard recovery. Among these were 5 cases of double lobar pneumonia, in 4 of which Dr. J. W. Bell of the University of Minnesota was called in consultation, and in which the prognosis offered, in spite of the frightful mortality in such cases, was sustained by the recovery.

The points of special interest noted during the treatment were:

1. A distinctly lowered pulse rate with maintenance of cardiac strength and regularity, considering temperature of patient and stage of the disease.
2. If the treatment is begun during first 12 hours of the disease many cases are aborted and in the majority of cases the duration of the disease is shortened.
3. Respiratory difficulty and chest pains are relieved by the ice application to such an extent, that not a single patient remonstrated against the "ice treatment," after first having tried its quieting and analgesic effect.

The last case treated entered the Norwegian Deaconess Hospital March 5, 1905, with lobar pneumonia on the right side, and in the course of 4 days pneumonia of both lungs developed. The pulse, as indicated on the accompanying chart, illustrates the preservation of cardiac power as witnessed during this line of treatment, the highest pulse rate observed being 104.

THE EXPANSION OF GYNECOLOGY, AND A SUGGESTION FOR THE SURGICAL TREATMENT OF INCONTINENCE OF URINE IN WOMEN.*

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CHICAGO.

The general law that progress in any direction is characterized by specialization, with its attendant classification and simplicity, has been exemplified in no great movement more strongly than in the development of the medical profession during the last three decades. The late Samuel D. Gross, foremost general surgeon of his day, after a long period of active service as author, teacher and practitioner, writing the preface to the sixth edition of his System of Surgery in October, 1882, thus early gives credit to specialization for the unparalleled advances in modern surgery. Specialization, he says in substance, has penetrated with its methods and instruments of research the innermost recesses of the human body, and in a comparatively brief period has achieved triumphs which general surgery perhaps never would have accomplished.

In the earlier period when the specialist confined himself to a particular organ, disregarding its relations to the general system, when frequently exclusive books appeared from this author, for example, on the stomach, or from that one on the brain, specialization was cumbersome, narrow, ineffective and a hindrance to scientific medicine. Finally, the logical tendency to study each part not by itself but in its essential relations to the whole system, gave rise to such a welding together into a great unit of all the specialties, that any

* President's address delivered at the annual meeting of the American Gynecological Society at Niagara Falls, 1905.

organ even though recognized in its individual importance and autonomy at the same time was equally recognized as subject to general law. It then became apparent that physiological and pathological processes, such as circulation and infection, were substantially the same whatever the organ involved. Order then came out of chaos and specialization became a potent factor in the simplification and progress of medicine. From this time forward laryngology, rhinology, orthopedics, ophthalmology, neurology, climatology, state medicine, obstetrics and gynecology rapidly developed and became identified in all parts of the civilized world with remarkable groups of men who have strengthened scientific medicine by building up these departments to an extent unequaled in any other period of history.

In nearly all of the medical teaching centers of America and Europe the most conspicuous specialty of modern medicine, gynecology, has enjoyed full recognition not only in the day of its early struggle, but later in the period of its highest development, with the significant result that in dignity of position and in output of scientific product it has in many respects outbalanced the department of general surgery itself.

The progress of gynecology has been marked by two pronounced periods: The first was an earlier period, characterized by great activity in the perfection of numerous plastic operations on the vaginal side of the pelvic floor. This development of minor plastic surgery calls to mind many familiar names at home and abroad, most conspicuous among them the names of two of our founders, Emmet and Marion-Sims. The second or later period was one of tremendous progress in the surgery of the obverse abdominal side of the pelvic floor. Now a third period is before us in which gynecology has taken to itself the whole field of abdominal surgery.

The early gynecologist was logically led by the anatomical, physiological and pathological unity of the reproductive organs into the peritoneal surgery of the pelvic cavity and thence by anatomic continuity into that of the upper abdomen. In peritoneal surgery, his educated touch, his special surgical judgment, and, above all, his training in the technic of plastic gynecology, placed him on a decided vantage ground over the general surgeon.

This widening of limitations to include the territory of abdominal surgery has given rise to an extraordinary and altogether interesting effort on the part of the general surgeon to promulgate the erroneous idea that the gynecologist has become a general surgeon and thereby has forced gynecology as a specialty into the background, where any one, even without special preparation, may practice it. Thus we hear of "The Merging of Gynecology into General Surgery." "The Passing of a Great Specialty." "The Expansion or Obliteration of a Specialty." We are told that gynecology is a finished subject, and that "he who runs may read," that it is only a matter of a few operative procedures, that the technic of it is now perfected and ready-made for the hand of any one, that soon in medical journals, in text books, in medical schools, in societies and hospitals, gynecology will be merged into general surgery and the name will be forgotten.

In considering this most recent attitude toward gynecology I do not refer to the practitioner who may be so situated that the most competent experts are not available; necessarily he may be compelled to the best of his ability, not for himself alone, but in the interest of his patient, to undertake not only gynecology, but all the other specialties, nor do I deny that a general surgeon of sufficient versatility may carry on miscellaneous surgical work and at the same time if he will undergo the necessary long and careful training, may acquire the special judgment, the special diagnostic and operative technic essential to proficiency in the practice of a great specialty; but this admission does not weaken the indictment which I would offer against a type of general surgeon, whose number increases day by day, whose relation to this specialty is the outcome of a reasoning all his own, a reasoning from the plausible premise that "the gynecologist, having perfected and simplified his specialty, has found it too narrow and has expanded" to the specious conclusion that gynecology is an insignificant branch and that the gynecologist therefore has undertaken general surgery. This logic gives rise to a sophistry; if the gynecologist is a general surgeon, conversely the general surgeon is a gynecologist. As the times change and we change with them, this type of universal operator, quick to seize on and to turn to his own account the intimation that this specialty has passed, with refinement neither of diagnostic nor operative technic, with no appreciation of his limitations, hypnotized by an apprenticeship of six weeks in some postgraduate school, or by no apprenticeship at all, emboldened by the fact that no one has called him to account, would make gynecology crude and common, would persuade the public and the profession that it is a mere caudal appendix to surgery on which no one fears to tread. Let us for the moment dismiss the general discussion of the subject and imagine a private hospital conducted under certain practical conditions of business management and promotion, with a year of active practice in capital operations, most of them belonging to this, forsooth, insignificant branch of surgery and a mortality of 70 per cent., and then with this experience as a background, going on for an additional few weeks to eleven more consecutive abdominal operations and 100 per cent. of mortality. Does this sound like a made up story? On the contrary, it is an extreme but nevertheless historical example taken not from the dark ages of surgery but from our own times.

Gynecology has not passed. We are not general surgeons. We are specialists in the diseases of women, and as our later transactions abundantly show, we are to a rapidly increasing extent specialists also in the wider field of abdominal surgery, a field in which the account on the ledger as it stands to-day will show general surgery indebted to us for a great part of its practical and scientific progress; the claim is valid, for we were blazing the trail through this territory when it was an untrodden wilderness, and it is ours by right of discovery; we were giving laws to govern the conduct of the stranger in this field when it was unknown and unconquered, and it is ours by right of conquest; we received from the pioneers, our teachers, some of whom are with us now, the principles and precepts on which has beeen built up this most aggressive department of surgery, and it is ours by right of inheritance.

Marion-Sims was not a general surgeon when he laid down the laws which to-day govern the surgery of the gall bladder, when he foreshadowed the modern treatment of gun-shot wounds of the abdomen and thereby set in motion a tide of general abdominal surgery of which the ebb flow, particularly in the upper zones of the abdomen, where we have joined hands with the general surgeon, is already overdue. Do the traditions which properly belong to us count for nothing? Shall we re-

tire in the background? Shall we organize a society of the Cincinnati, enter into our second childhood and live on the memories of the past? Is our work done? Shall we say, "Troy has been, we have been Trojans?" If our work is done, why should we not go at once into voluntary liquidation? Why hold another meeting? But so long as in the diseases of women there are more practical and scientific problems to be solved than we have time to enumerate, our work is not done. Does not the increased strain of modern life notwithstanding improved knowledge of sanitation and hygiene bring about exaggerations of pathology which will demand not less but more of the gynecologist? If we do not respect our own specialty, who will? Let us consider, for example, the every-day subject of dysmenorrhea, about which as yet we know but little; the causes of eclampsia, of which we know less; the purpose of menstruation, of which we know nothing; the unknown conditions, which in one case will supply defense against general septic peritonitis and in another apparently similar case will open the way to a rapidly fatal peritoneal infection. Let us reflect that we have not spoken the last word on the surgical treatment of descent, retroversion and other deviations of the pelvic organs; let us consider whether in the next thirty years we or the general surgeons are going to make such improvements in practical gynecology that the hysteropexies, the hysterorrhaphies, the suspensions, the fixations and a number of other procedures may look to our successors as crude and irrational as the clamp and routine use of the drainage tube in ovariotomy look to us at the present time.

And now supplementary to this discussion, may I offer a suggestion? In recent years, abdominal surgery has so far engrossed the mind of the gynecologist, not to mention that of the general surgeon, that by comparison the minor plastic work to some extent has been neglected or given into incompetent hands. It is perhaps not too much to say that our fathers in their day did better plastic surgery than we are doing in ours. Indeed a revival of interest may be necessary in order to save this part of gynecology from becoming a lost art. There is now accumulating a very appreciable number of patients on whom plastic operations, some of them repeated on the same patient many times over, have been performed with indifferent or injurious results. Many such patients need to have the work undone or done over again. And this class of cases now, therefore, is making an increasing demand on the attention of the competent gynecologist. It is time, therefore, without losing sight of the claims of capital surgery, to bestow adequate attention on the homely every-day problems of minor gynecology; to this purpose I venture to bring forward, as an epilogue, a small contribution concerning a commonplace though troublesome malady about which the literature, so far as I have been able to examine it, is not altogether satisfactory.

INCONTINENCE OF URINE IN WOMEN.

This communication is confined to the involuntary escape of urine through the urethra. Incontinence due to acquired urinary fistula or to any congenital defect of the urinary tract will not be considered. Broadly speaking, from the point of view of the causative pathology, incontinence has been classified under two general forms, and these forms may occur singly or combined; they are:

1. Active incontinence; 2, passive incontinence.

1. Active incontinence is due either to a hypertonic, constricted or distended state of the bladder which causes the urine to be involuntarily forced out through a urethra which under ordinary conditions would have adequate sphincteric power. The bladder acts to a variable extent as a reservoir, but the sphincter is inadequate to prevent involuntary escape of urine. Among the causes of this form of incontinence are abnormal urine, foreign bodies, tuberculosis, cicatrices, tumors of the bladder, cystitis and other conditions which may give rise to such irritation and consequent contraction of the walls of the bladder as to overcome the sphincteric power of the urethra and to force out urine. Overflow of an enormously distended bladder or of a bladder very much contracted from cystitis and having thick unyielding walls, would be an example of active incontinence. Further discussion of active incontinence does not fall within the scope of this paper.

2. Passive incontinence is due to some sphincteric defect, such, for example, as traumatism or paralysis which deprive the neck of the bladder and urethra of the power of retention. Complete paralysis of the sphincter which causes urine to escape involuntarily as fast as it enters the bladder, which is apt to be of spinal origin and consequently associated with paralysis of other parts, such as the bowel, bladder and lower extremities, also will be excluded from further discussion.

The essential purpose of this paper is to consider the surgical treatment of another and frequent variety of passive incontinence common in multiparous women and usually due to the traumatisms or other results of parturition. This special form of incontinence is always characterized by a very appreciable sagging away of the urethra and neck of the bladder from the pubes, and by a dilated sacculated appearance of the urethra. This separation of the urethra from the pubes is often caused by a crushing or tearing of it from the symphysis during parturition. The condition ordinarily is one of urethrocele and commonly is associated with more or less cystocele, laceration and relaxation of the perineum, and subinvolution of the whole vaginal outlet. The loss of urine is not constant but is occasional or frequent and occurs as a result of coughing, sneezing, sudden change of position, fright or from some unassignable, perhaps neurotic, condition. The bladder is neither distended as in cases of dribbling from overflow of urine, nor constantly empty, as in passive incontinence from paralysis of the sphincter, but normally holds more or less urine which the patient can pass or retain at will. The condition will be recognized as one of frequent occurrence, great embarrassment to the patient, and difficulty of cure.

METHODS OF TREATMENT.

In the literature up to the present time, numerous operations and procedures have been put forward for the relief of this form of incontinence; excluding those not specially pertinent to the subject, they are: 1. Injection of paraffin into the region of the urethra. 2. Massage and electricity. 3. Torsion of the urethra, after Gersuny. 4. Advancing of the urethra after the method of Pawlik, Hummelfarb, Albarran and others.[1]

1. Injection of paraffin, even if it gave good results, which it does not, would be prohibited because of danger to life from pulmonary embolism.

1. The significant literature on the subject dates back but a few years and is rather meager. I am indebted to Dr. Heliodor Schiller for numerous references to articles, mostly German, which during the past thirty years have appeared in the periodical literature, many of which I have consulted.

2. Massage and electricity, although sometimes temporarily effective, seldom give permanent results.

3. Torsion of the urethra, after the method of Gersuny, which requires the urethra to be dissected loose from its surrounding throughout its length, then twisted on itself from 180° to 450° and sutured in place, is apt to overcome incontinence, but is prohibited on account of danger from sloughing of the urethra.

4. The advancing of the urethra, after Pawlik's method, consists of two lateral denudations, one on either side of the urethra, and suture of the denuded surfaces in such a manner as to cause the urethra to be stretched laterally and to be drawn up toward the mons veneris.

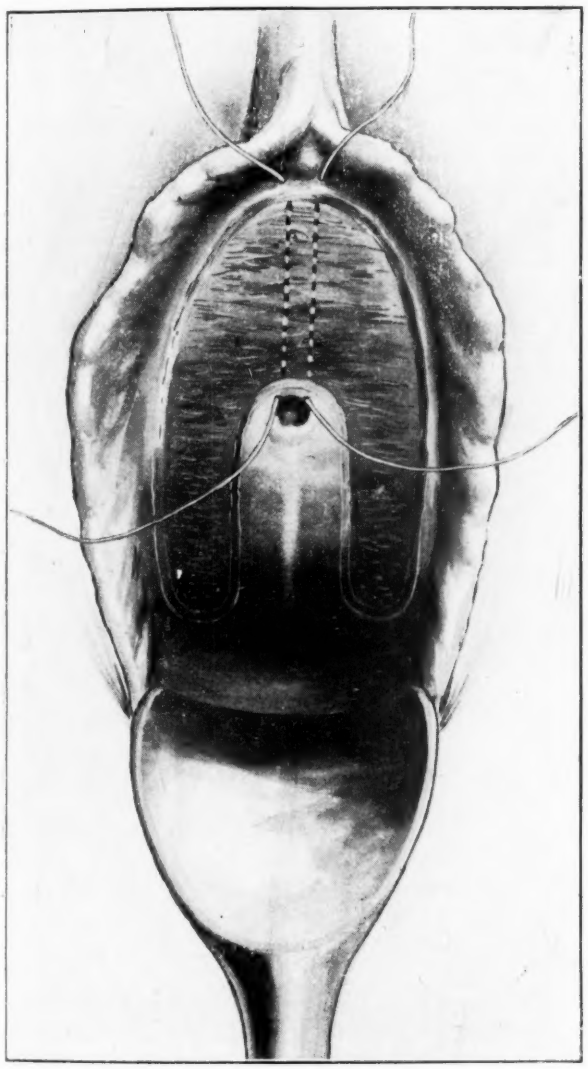

Fig. 1.—Operation for incontinence of urine, showing denuded surfaces and the first two sutures in place, but not tied.

The operation is performed according to Pawlik in two parts, the wound on one side being allowed to unite firmly before that on the other side is made. This operation is sound in principle, that is, advancement of the urethra, but the results too often have not been permanent. Pawlik has proposed another operation in some respects similar to the one which I shall describe later, but so far as I can learn he confines the application of it to cases of congenital epispadias and congenital shortening of the urethra. Hummelfarb lengthens the urethra by union of the labia between the meatus and the clitoris in order that retention may be secured by raising the meatus above the level of the urine in the bladder. The urethra is then expected to act on the principle of the spout of a teakettle. This method, earlier described by Emmet, in a majority of cases fails on account of the activity of the contracting bladder forcing out urine (active incontinence) regardless of the level of the outlet. Albarran's operation consists of dissecting free the urethra, in making an incision from the meatus to the clitoris, in forming two flaps, in raising the urethra to the clitoris, and in suturing the flaps over it. This operation is effective unless, as sometimes occurs, freeing of the urethra from its surroundings gives rise to sloughing.

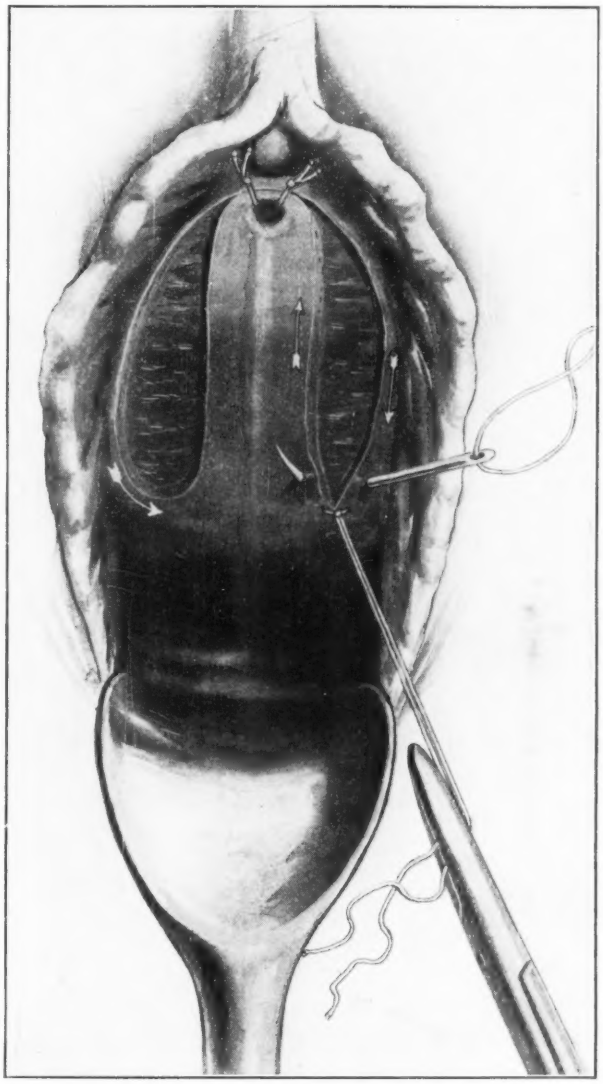

Fig. 2.—First two sutures tied and meatus urinarius drawn up to the clitoris and fastened there. The arrows here show the margins of the lateral parts of the wound so rotated as to make the sutures hold the urethra firmly in its newly acquired elevated position.

PROPOSED OPERATION.

The operation which I would propose is based on the same principle as that proposed by Albarran, that is, advancement of the meatus urinarius to the clitoris, but this is done without dissecting the urethra free and, therefore, it obviates the danger of sloughing of the urethra; it is performed as follows in two steps:

First Step.—A horseshoe-shaped surface is rather deeply denuded between the meatus urinarius and the

clitoris, and to either side of the urethra throughout the entire length of it, as shown in Figure 1.

Second Step.—The meatus is drawn up to a point near the clitoris and is secured there by means of two sutures (Figs. 1 and 2). The lateral portions of the denuded surface are now closed, as shown in Figure 3. The effect of the operation is to replace and to retain in its functional relations the sagging displaced urethra. It will be observed that the two first sutures necessarily stretch the urethra upward to the region of the clitoris and that the lateral sutures must tend to hold it in its new position. By this means, it is proposed to straighten out the urethrocele, by longitudinal traction,

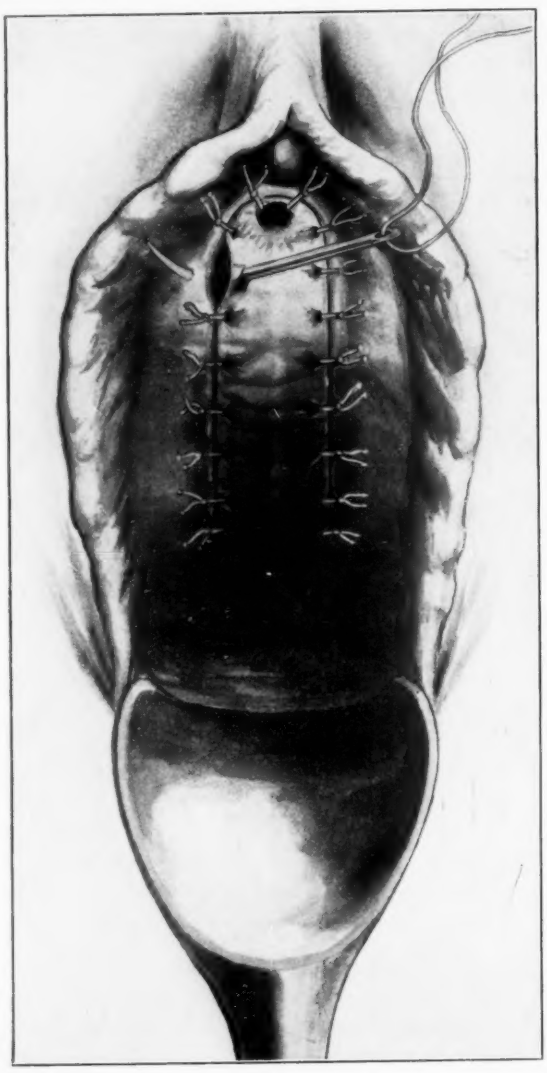

Fig. 3.—Last suture being introduced to complete the operation. The previously sagging urethra is here shown as extended and held firmly up against the pubes in its normal relations. While the lateral sutures are being passed it is well to have the meatus strongly pulled up toward the mons veneris by means of a tenaculum hooked into it and held in the hand of an assistant.

and by lateral traction to collapse and to hold together the dilated walls of the urethra and thus to overcome the sacculation at the neck of the bladder where residual urine is apt to accumulate and give rise to trigonitis, cystitis and possible incontinence.

In many cases, it will be necessary to combine with the operation some appropriate surgical treatment for an associated cystocele and in nearly all cases to perform perineorrhaphy to relieve also relaxation of the posterior vaginal outlet. In one case, I saw fit to narrow the pouching urethra in order to overcome the urethral dilatation.

I have performed this operation five times since January 1, 1905. In the first four cases, relief from incontinence was immediate and, so far as I can learn, has been continuous. The last operation is too recent to be taken into account here. In one case, there was so much relaxation of the skin and other soft parts in the region of the clitoris that I feared the sutured urethra might pull these structures down to the old malposition instead of being held up by them, but so far it remains well in place. In such a case again, or in the event of recurrence from such a cause, however, I should be disposed to make a deep oval denudation over the pubes on the mons veneris just above the clitoris, the longer axis of the oval being directed transversely, and to unite the margins of this wound by a transverse line of union so as to make the clitoris a fixed point on a sufficiently high plane to hold the urethra taut. For obvious reasons, this procedure would be preferable to the removal of the clitoris and the union of the meatus to the parts thereby exposed.

The patients operated on so far are too few and the time since the operations were performed has been too short to warrant any prediction of future results, but the meager and unsatisfactory literature on the subject and the intractable nature of the disorder in spite of such treatment as we have at our command lead me to place before you this record of my own observation. The operation is so simple that I have been rather surprised not to find myself precisely anticipated in every particular, but so far as I have been able to learn, the operation, in some essential respects at least, is novel. If it should be found, however, that I am duplicating the work of another, I desire to make due acknowledgment in advance, "for I would call no other man's labor my own."

STENOSIS OF THE PYLORUS IN INFANCY.

AN ANALYSIS OF 115 CASES.

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AND
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BOSTON.

(*Concluded from page 1671.*)

PROGNOSIS.

The prognosis of these cases of infantile pyloric stenosis if untreated surgically is practically hopeless. A few patients are said to have recovered under expectant treatment.

Batten's[14] case resulted in an apparent cure after several months of nasal tube lavage and dieting. An acute attack of vomiting and diarrhea occurred and the patient died when 11 months old. The autopsy showed a pylorus admitting a probe only 4 mm. in diameter; a narrow pylorus. The symptoms evidently abated under medical treatment, but the condition was not cured.

That these cases may be benefited temporarily by medical treatment is likewise illustrated by the report of Shaw.[24]

Finkelstein,[26] Senator,[27] Saunders,[17] and Stamm[28] report instances of recovery following partial stenosis of the pylorus, that is, in subacute or in chronic cases. Finkelstein's cases were three and were from Heubner's

26. Finkelstein: Jahr. f. Kinderheilk., 1896, vol. xliii, No. 1, p. 105.
27. Senator: Berlin. klin. Wochft., 1897, No. 2, p. 44.
28. Stamm: Munich med. Wochft., 1904, vol. li, p. 232.

clinic, seen at 9, 9 and 4 weeks of age, respectively. They had been vomiting since they were respectively 5, 3 and 3 weeks old. There was gastric distension and visible peristalsis. They were treated by regular breast nursing, lavage of the stomach, rectal feeding, laxatives and small doses of opium. They are said to have recovered. Of course, the correctness of the diagnosis in these cases may never be absolutely established.

Moreover, if there existed in these so-called cured cases relative stenosis we do not know yet what the completed story may be. The stenosis may at any time become absolute. The child may have periodic attacks of vomiting, and may suffer all its life from gastric disturbances, from malnutrition and from a train of dependent conditions.

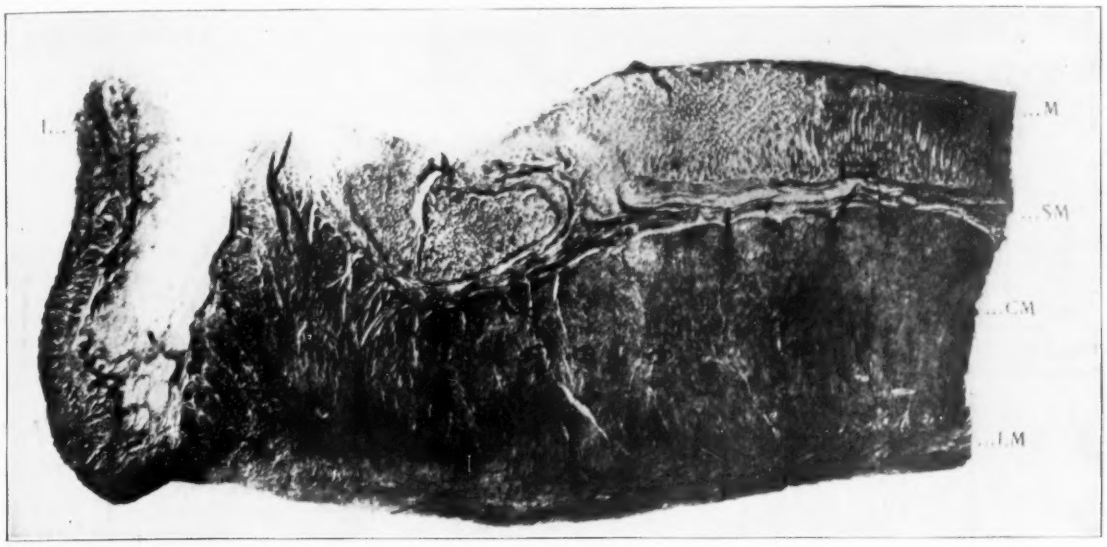

Fig. 9.—First symptoms appeared at 6 weeks. Died at 2½ months. Stomach distended. Pyloric tumor. Pyloric wall thickened. Lumen, 2 mm. Mucous membrane in longitudinal folds. No signs of ulceration, fibrous thickening of submucosa, hyperplasia of circular fibers, thickening of longitudinal long fibers also. M, mucosa; SM, submucosa; CM, circular muscle; LM, longitudinal muscle; I, intestine. (Dorning, Archives of Pediatrics, 1904.)

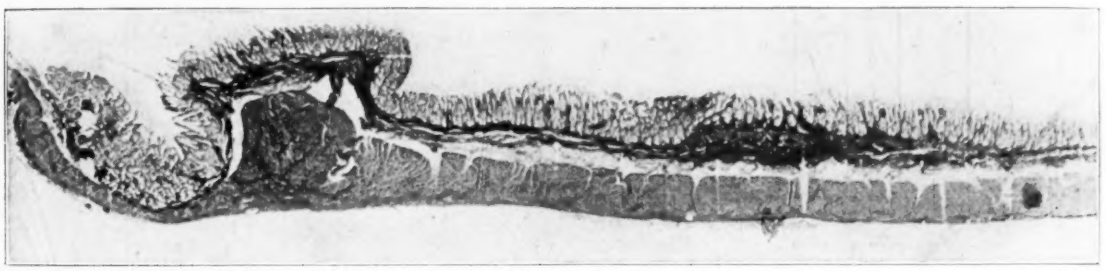

Fig. 10.—Section through the normal pylorus, duodenum and stomach of a child 3 months old. The muscular coat is rather thicker than normal. The duodenum lies to the left. (Cautley and Dent, Medico-Chir. Trans., vol. lxxxvi.)

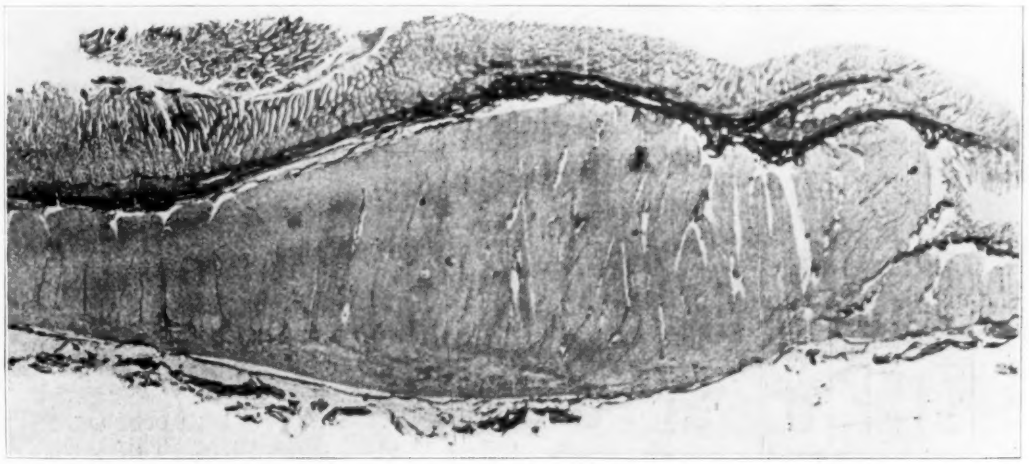

Fig. 11.—Section through the pyloric end of the stomach in the case of a hypertrophied pylorus of a child of 3 months. The thickening of the circular fibers commences in the stomach wall some distance from the pylorus. The muscular coat at the commencement of the duodenum is thickened. The duodenum lies to the right. Compared with Figure 10. (Cautley and Dent, Medico-Chirurg. Trans., vol. lxxxvi.)

I very much doubt the permanence of the cure in cases treated medically. To withhold operative treatment after the diagnosis of pyloric obstruction has been made leaves the case practically hopeless, according to the evidence available.

There are probably cases of narrowing of the pylorus operated on during childhood and adult life, as described by Maylard,[29] which are to be regarded in a class by themselves. No hypertrophy is found in these cases, only a simple narrowness of the pyloric lumen. It is unnecessary to associate these in any way with the infantile pyloric hypertrophy group.

TABLE 4.—TABULATION OF ALL OPERATIONS.

OPERATION.	Cases.	Recovery.	Died.	Mortality Percentage.
Gastroenterostomy	40	21	19	47.7
Loreta	11	7	4	36.3
Pyloroplasty	8	4	4	50
Pylorectomy	1	..	1	100
Total	60	32	28	46.6

TABLE 5.—GASTROENTEROSTOMY RECOVERIES.

NAME.	Date.	Symptoms. Age at Beginning, in Weeks.	Symptoms. Duration in Weeks.	Age at Operation in Weeks.	Well latest report.	Operation.
Fritzsche	1899	2	4	6	1½ yrs.	Ant.
Kehr	1899	4	3	7	.....	"
Kehr	1900	4	4	8	8 mos.	Post.
Abel	1899	3	5	8	13 days.	Ant.
Schotten	1903	2	3	5	3½ mos.	"
Löbker	1898	9	1	10	2 yrs.	Post.
Monnier	1901	2	4	6	5 mos.	Ant.
Stiles	1904	5	5	10	13½ mos.	Post.
Stiles	1904	..	..	6	3½ mos.	"
Giles	1904	5	2	7	3 mos	"
Trantenroth	1901	1	4	5½	6 mos.	Ant.
Munro	1904	1	3	3	6 mos.	Post.
Elting	1904	..	20	64	9 mos.	Ant.
Stiles	..	..	..	..	.....	
Stiles	..	..	..	..	.....	
Nicoll	1900	..	..	..	.....	A or P
Nicoll		..	..	..	.....	"
Nicoll		..	..	..	.....	"
Nicoll		..	..	..	.....	"
Nicoll		..	..	..	.....	"
Nicoll	Oct. 1904	..	..	..	.....	

TABLE 6.—GASTROENTEROSTOMY. DEATHS.

NAME.	Date.	Symptoms. Age at Beginning, in Weeks.	Symptoms. Duration in Weeks.	Age at Operation, in Weeks.	Death.	Remarks.	Operation.
Bull	1904	2	2	4	12 hrs	.....	Post.
Meyer	1898	1	3	4	30 "	Button	Ant.
Schotten	1902	4	2	6	14 "	Very weak	Post.
Löbker	1899	..	..	7	....	Peritonitis	"
Stern	1898	3	4	7	24 hrs.	Evisceration	"
Jordan	1903	..	..	..	.....	.....	"
Jordan	1903	..	..	..	.....	.....	"
Mackay	1903	4	16	20	36 hrs.	.....	"
Munro	1904	3	4	7	23 "	.....	"
Stiles	..	..	..	5	Soon.	.....	"
Mikulicz	1903	..	..	12	2 mos.	Perforating ulcer.	Ant.
Bottomley	1904	5	3	8	10days.	Very weak	Post.
Meyer	..	..	..	..	.....	.....	?
Stiles	..	..	..	..	.....	.....	....
Stiles	..	..	..	..	.....	.....	....
Stiles	..	..	..	..	.....	.....	....
Nicoll	..	..	..	..	.....	.....	A or P
Nicoll	..	..	..	..	.....	.....	....
Nicoll	..	..	..	..	.....	.....	....

SURGICAL STATISTICS.

What has surgery thus far accomplishel for pyloric stenosis in infancy? Sixty operations have been performed on 59 patients. These are all the operative cases of which satisfactory records exist up to January, 1905 (Table 4).

29. Maylard: British Med. Jour., 1904, No. 1, p. 416.

Of these 60 operations, 40 were gastroenterostomies; 21 recovered (Table 5), 19 died (Table 6), a mortality of 47.7 per cent. Of these gastroenterostomies a little more than half were posterior operations and the others were anterior operations. The place of the anastomosis, whether anterior or posterior, apparently did not affect the mortality rate in these particular cases, except in one instance, which will be mentioned later.

There were 11 divulsions of the pylorus or Loreta operations, 7 recoveries and 4 deaths, a mortality of 36.3 per cent. (Table 7). There were 8 pyloroplasties, with 4 recoveries and 4 deaths, a mortality of 50 per cent. (Table 8). There was one pylorectomy and one death.

A grand total of 60 operations, with 32 recoveries and 28 deaths. A general mortality of 46.6 per cent. (Table 4.) That is, out of 60 cases operated on more than half were saved, 53.5 per cent. These results are certainly brilliant. They represent the achievements of 28 different operators, facing in almost every instance a most desperate problem.

TABLE 7.—CASES OPERATED ON BY DIVULSION OF PYLORUS.

NAME.	Date.	Symptoms. Age at Beginning, in Weeks.	Symptoms. Duration in Weeks.	Age at Operation, in Weeks.	Results.	Remarks.
Nicoll	1899	7	5	12	R	Well 3 years.
Schmidt	1900	3	5	8	R	Well years.
Lendon	1902	2	..	..	D	Lap., 11 weeks.
Mackay	1903	5	1	6	D	After 22 hours.
Stiles	1902	..	..	6	R	Well 1 year.
Stiles	1902	..	3	3+	D	Perforation.
Stiles	1904	2½	2	4+	R	Well 2 years.
Burghard	1903	..	..	8	R	Well 7 months.
Stiles	Gastroenterostomy				R	Failure.
Nicoll	.....	.....	.....	.....	D	Six days. Failure.
Nicoll	.....	.....	.....	.....	R	Failure in 6 months.

TABLE 8.—CASES OPERATED ON BY PYLOROPLASTY.

NAME.	Date.	Symptoms. Age at Beginning, in Weeks.	Symptoms. Duration in Weeks.	Age at Operation, in Weeks.	Results.	Remarks.
Dent	1902	3	5	8	D	Enteritis.
Dent	1902	3	3	6	R	
Dent	1904	2	5	7	R	
Campbell	1904	2	6	8	D	Six days.
Braun	1901	1	5	6	D	Twenty hours.
Guthrie	6	..	..	..	R	Well in 7 months.
Dent	1903	..	..	5	R	
Granboorn	1902	1	2	3	D	Six weeks.
	Pylorectomy					
Sitles	1900	....	....	9	D	Thomson's Case.

No apologies are needed to the critics of surgery for the comparatively large mortality of 46.5 per cent. Had not these particular cases been operated on they all probably would have died. Many were almost moribund when placed under surgical care.

These operations have been done since 1898, that is, during the past seven years. This period is a part of the formative or developmental period of gastric surgery. Operative technic is only just reaching its perfection. Important improvements in technic are only now beginning to be adopted. Taking into consideration, therefore, these facts, namely, the yet unsettled question of the best procedure, the faulty technic and the fact that the child was presented for operation as a last resource, after medical experiments had failed, these immediate results are encouraging. As for the end results of sur-

gical treatment we are in the possession of data regarding 14 or 15 cases out of a total of 53; all are well, from several months to three years after operation.

There are certain facts of interest which should prove surgically instructive in connection with pyloric stenosis of infancy.

The first case was operated on in 1898 by Meltzer,[30] in New York, a posterior gastrojejunostomy was done with the aid of a Murphy button. The child died because of intestinal obstruction due to the use of too large a button. (Figs. 15 and 16.)

Löbker,[31] July 25, 1898, performed the first successful operation, a posterior gastroenterostomy by suture. For two years after operation the child was perfectly well. Abel[13] is often credited with having performed the first successful gastroenterostomy, but the records of his case state that the child was discharged on the thirteenth day after operation and no further facts are available. One can hardly assume that the child made a complete recovery. Löbker's case was certainly far more accurately

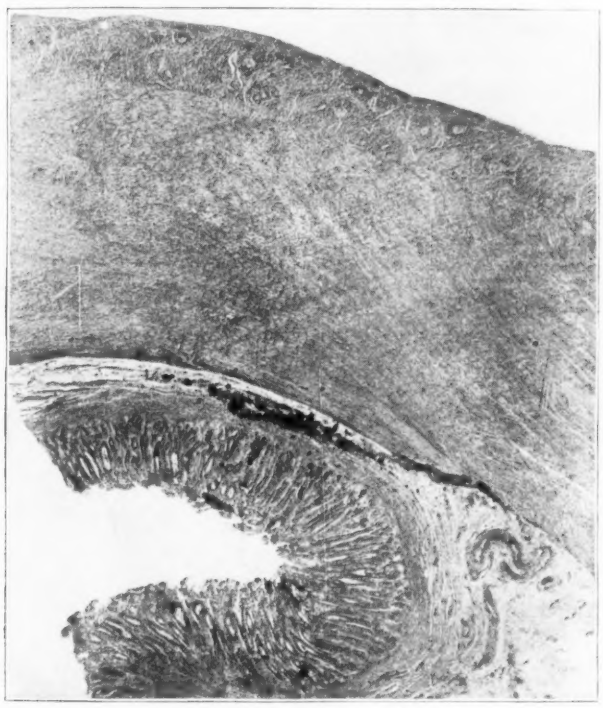

Fig. 12.—Section through the pylorus of a child 3 months old, who had an hypertrophy of the pylorus which resulted in death. The pylorus was 1.5 cm. long, 1.3 cm. in diameter. Note the tremendously thickened circular fibers which have been cut at right angles to the long diameter of the gut. The longitudinal fibers have been cut transversely; their bundles are clearly seen. (Munro-Townsend, Magrath.)

reported and should have the first place awaiting further news from Abel.

Nicoll[19] records the first case of divulsion of the pylorus—the first Loreta. The operation was performed July 25, 1899. The child recovered and was in good health three years subsequently.

Braun records the first pyloroplasty performed Oct. 18, 1900. The child died in twenty hours after the operation.

Gastroenterostomy, divulsion, pyloroplasty and pylorectomy are the four procedures which have been employed in these cases of infantile pyloric stenosis.

30. Meltzer: Med. Rec., 1898, p. 253.
31. Löbker: Verhandl. d. deutsch. Gesell. f. Chir., vol. xxix, 1900, No. 1, p. 148; 1901, No. 1, p. 158.

The majority of the operative deaths occurred soon after the operation and were due to the weakened condition of the child. In the last analysis, however, this weakened condition was due to the ignorance of the attendant, whether surgeon or physician is immaterial, who did not make an early enough diagnosis or persisted too long in expectant treatment.

Meltzer's patient died not because he used a Murphy button, but because he misused the button, employing one too large for the small lumen of the child's intestine, a death, therefore, occasioned by faulty technic.

Mackay's patient died because, in doing a gastroenterostomy, the redundant mucous membrane was not excised. The redundant mucous membrane blocked the opening formed by the operation. The symptoms persisted and the child died. Autopsy demonstrated the cause of death to be a faulty technic. Littlewood of Leeds, England, first suggested the excision of the mucous membrane in a gastroenterostomy. Moynihan has mentioned that the Murphy button happily accomplishes the same result by causing a pressure necrosis.

Stern's[32] patient died, probably, because of the additional shock occasioned by the escape of the intestines through the abdominal incision. The intestines were

Fig. 13.—Child alive. Demonstration of gastric peristalsis and pyloric tumor. (Fisher and Nield.)

with difficulty replaced. An accident very liable to happen, but also the result of faulty technic.

Schotten,[33] Munro,[34] Meyer,[35] each had very debilitated children on which to operate.

Löbker's[31] patient died of a peritonitis due to leakage from the bowel occasioned by a poorly placed suture, i. e., faulty technic.

In one of Stiles' cases the Loreta operation failed to be permanently beneficial and a subsequent gastroenterostomy resulted in curing the child.

In one of Stiles' cases of the Loreta operation, the patient died of peritonitis occasioned by a perforation of the duodenum. The perforation was made while dilating the pylorus. In another Loreta operation, Lendon's[36] case, a relapse occurred and the patient died at a subsequent exploratory laparotomy, at which nothing was done because of the many adhesions found! In Mackay's Loreta case the patient died of obstruction from re-

32. Stern: Deut. med. Wochft., vol. xxiv, 1898, p. 601.
33. Schotten: Sammlung klin. Vorträge, N. F., 1904, No. 368.
34. Munro: Boston Med. and Surg. Jour., 1904.
35. Meyer: Med. Rec., Aug. 20, 1898.
36. Lendon: Australian Med. Gaz., December, 1902, p. 558.

dundant mucous membrane. In Campbell's[37] case, a pyloroplasty, the patient died because of the obstruction occasioned by the redundant mucous membrane, which was not removed at the time of the operation. Trantenroth was unable in one instance to stretch the pyloric sphincter; it was tough and would not yield. He did an anterior gastroenterostomy. The child recovered. In Campbell's case of pyloroplasty the suturing produced a kink which may have contributed to the cause of death.

Mikulicz has reported a most interesting case. He did an anterior gastroenterostomy on a child with pyloric hypertrophy of extreme type. The immediate relief was satisfactory, but the child died two months later of a peritonitis occasioned by a perforating jejunal ulcer. This child had no increase in HCl in the gastric juice. As Mikulicz suggests in this particular case, the HCl could not have been the cause of the ulcers.

The problem presented to the surgeon by these cases of pyloric stenosis in infancy is similar to the problem which confronts him in the stenosis of the pylorus of adult life except for the conditions dependent on the age of the patient. These conditions are of very great importance. The operation will always be in the nature of an emergency, no matter how soon after birth it is performed. The parts to be operated on in comparison with the adult anatomy are very, very tiny! (Fig. 19.) The overcoming of the obstruction demands a procedure at once rapid of performance, safe and efficient for the emergency and calculated to afford permanent relief.

Rapidity is essential to success, for these tiny patients are easily shocked by delay and by tedious manipulations. To insure rapid operating the surgeon should be particularly familiar with the procedure selected and with the technic of its proper performance. These may seem idle words, but this review of the work done in these cases is a sad commentary on what might have been. I personally believe that so much depends on skilled judgment in the selection of the proper procedure in each case of stomach surgery, to speak broadly, and that so much depends on the familiarity of the operator with the tiny essential details of the technic used in the carrying out of the procedure that stomach surgery should be done, not by every surgeon, but by those who have fitted themselves especially for it and who have demonstrated themselves to be prepared for it.

Rapidity necessitates simplicity of procedure and familiarity with the technic necessary for its accomplishment. The operation must be safe and free from causative factors of shock, namely, sepsis, hemorrhage, prolonged manipulation and loss of body heat. Sepsis will be avoided by emptying the stomach of any unvomited residue previous to operation after anesthesia, by the use, when feasible, of rubber-covered clamps to prevent the escape of the contents of the stomach and intestine, and the prevention of hemorrhage. These small patients bear the loss of a little blood poorly.

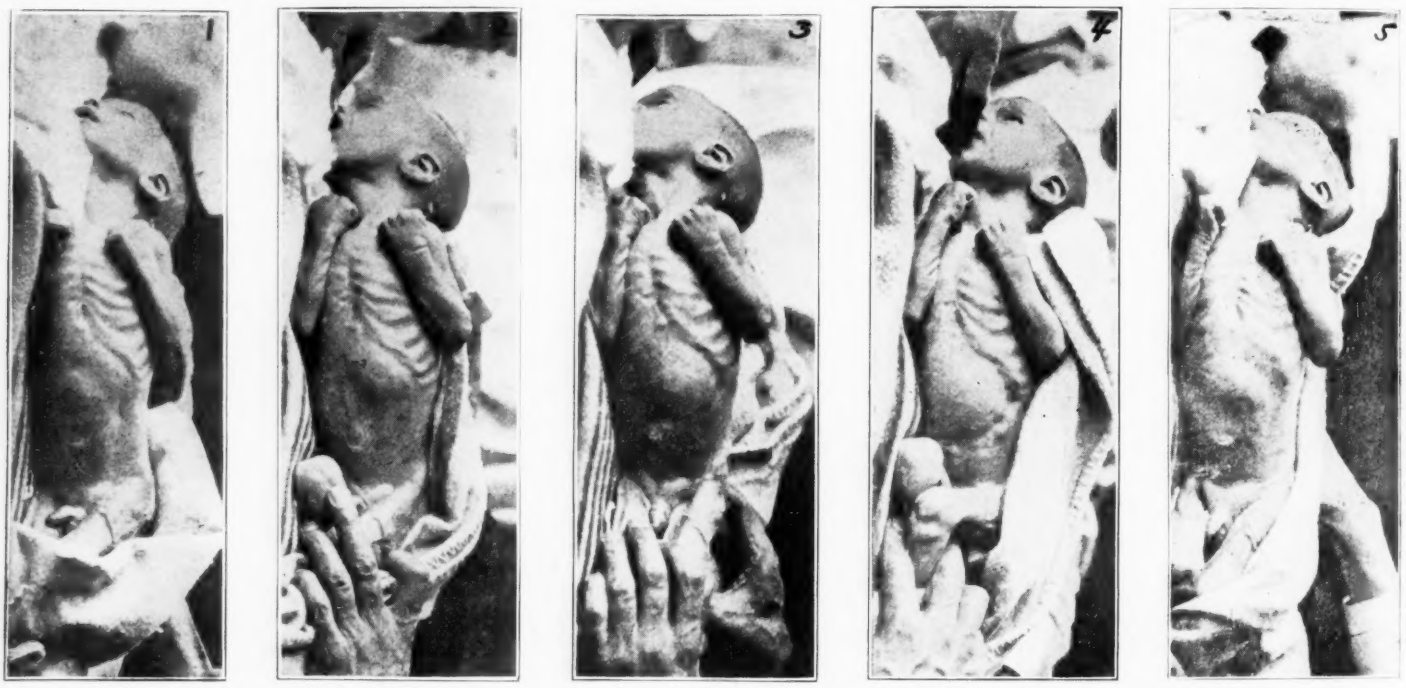

Fig. 14.—Photographs of a living child, showing the emaciated condition present in hypertrophy of the pylorus. Note the peristaltic wave passing over the stomach from right to left. (Fisher and Neild, Bristol Medico-Chirurgical Journal, June, 1904.)

Isolation of the operative field is important, so that practically all work may be done outside the abdominal cavity. It is important to handle the parts gently and as little as possible. It is necessary to wash the exposed parts with warm saline solution before restoring to the abdominal cavity, and it is also important to replace the part handled as nearly as possible in its normal anatomic relations. It is necessary to wrap the patient in sheet wadding or warm small blankets or to use a warmed operating table. Moderate stimulation is wise; rectal nutrient enemata previous to operation often have a wonderfully good effect on these little patients.

The use of subpectoral or rectal saline injections immediately after operation is extremely helpful. All these ordinary measures, especially in babies, diminish shock, and attention to these details is essential to success.

Which method of overcoming the obstruction will prove most efficient and lasting? In these cases reported

37. McCaw-Campbell: British Med. Jour., June 25, 1904, p. 1483.

the Loreta operation of divulsion was several times unsatisfactory. The Loreta operation has likewise proved inefficient in adult cases. Recurrences have been noted both in babies and in adults. Accidents have happened during the performance of a Loreta operation. The pylorus is so small that the gut has been ruptured, wi subsequent fatal peritonitis.

The mucous membrane in certain Loreta cases has been damaged by the great pressure necessary to the proper performance of the operation, and danger from subsequent cicatrices is not absent. Despite the apparent

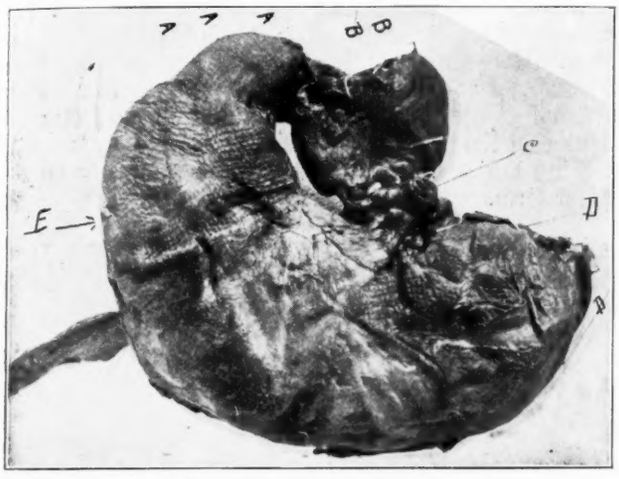

Fig. 15.—(Meltzer's case.) Anterior view: A, pylorus; B, dilated duodenum; C, cardium; D, fundus; E, pyloric part; F, distal jejunum. (Meltzer, Trans. Asso. Am. Phys., vol. xiii, p. 188.)

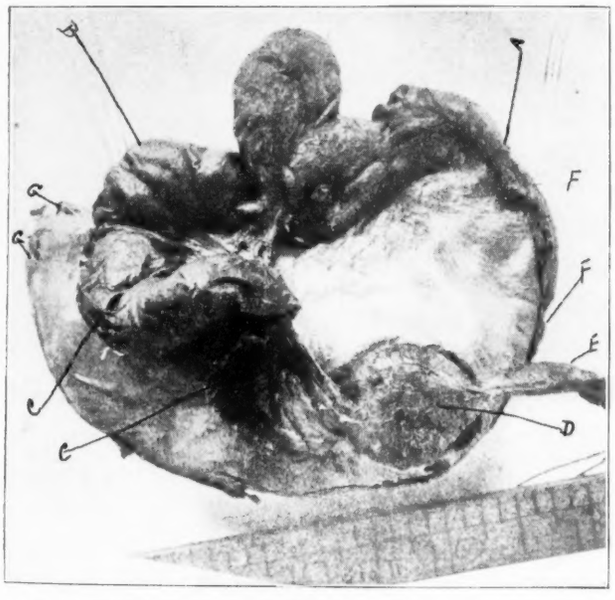

Fig. 16.—(Meltzer's case.) Posterior view: A, pylorus; B, dilated duodenum; C, dilated jejunum; D, Murphy button; E, distal jejunum; F, pyloric part of stomach. G, fundus. (Meltzer, Trans. Asso. Am. Phys., vol. xiii, p. 188.)

lower mortality, this method is inefficient, unsafe and, therefore, not to be used. Nicoll[19] of Edinburgh uses the Loreta method together with a gastroenterostomy in cases that are not too ill to have both of the operations done at one time. It has been found physically impossible to dilate the pylorus in some of these cases.

Pylorectomy is obviously too severe an operation. Pyloroplasty has its advocates in the Englishmen, Cautley and Dent,[38] and there is no doubt that certain cases have done well after this operation. It is a procedure with which one should be familiar and which should be practiced in a certain few of these cases in which the pyloric tumor is small, and in which it can be done without kinking the gut.[39] Personally I am not attracted by pyloroplasty. Both Robson and Moynihan say: "Pyloroplasty, on account of the great thickness of the pylorus and its rigidity in the whole circumference, is applicable."

Some form of gastroenterostomy is the operation best suited to the conditions, but an anterior gastroenterostomy is to be avoided, if possible. Taking all operations together, more trouble subsequent to operation in adults has arisen after an anterior gastroenterostomy than after a posterior one; and the likelihood of jejunal ulcer exists (See the case of Mikulicz). There are in adult life 16 reported instances of jejunal ulcer, nearly all following the anterior operation. Robson has just added a case to this ulcer list.

The mesentery of the baby's jejunum is short in proportion to the width of the gut as compared with the mesentery of the adult gut. It has been found impossible in several cases to do an anterior gastroenterostomy because of this shortness of the mesentery. (Fig. 18.)

Fig. 17.—The appearance of the pylorus, looked at from the duodenum; from a case of hypertrophy of the pylorus; age of child, 3 months. Note the sharp line of demarcation between pylorus and duodenum.

Nature suggests the posterior method. In most cases a posterior gastrojejunostomy with no loop will prove satisfactory and feasible.

The gastro-pyloro-duodenostomy, first suggested by Finney of Baltimore, may meet the conditions existing in certain of these cases of infantile pyloric stenosis. The incision divides the obstructing stenosed part and allows the stomach to empty its contents into the duodenum at approximately the normal anatomic location.

In many cases this form of gastro-pyloro-duodenostomy in the adult patient has proved satisfactory. Adhesions about the duodenum and pylorus and the normal fixation of the duodenum sometimes offer serious difficulties to the performance of Finney's operation in the adult, but in these cases of pyloric stenosis in infancy no such objections hold. The duodenum is very mobile even to the median line of the body. No adhesions are ever found.

If for any reason, such as rigid or large tumors, the Finney operation is not feasible, Kocher's gastroduodenostomy may prove useful. The duodenum is so freely

38. Cautley and Dent: Lancet, 1902, vol. ii, p. 1679; Medico-Chirurgical Trans., 1903, p. 474.

39. Adhesions of the pylorus, subsequent to pyloroplasty such as are recorded in the adult—Heinecke-Mikulicz operation—and because of which it has been abandoned by some, probably may be avoided by omenial grafting.

movable that it may be placed in contact with the stomach so as not to kink the first portion of the duodenum.

My feeling, then, with regard to the operative procedure to be used in a case of infantile stenosis of the pylorus is that the posterior gastroenterostomy, without a loop, made as snug to the origin of the jejunum as is possible, has first choice. A Finney operation, a Köcher gastroduodenostomy and a pyloroplasty in some cases may be of value. The whole matter is too unsettled to definitely and finally commit myself to any procedure.

The care after operation is of the most vital importance. These little weak patients respond to good care, gentle stimulation and careful feeding. If possible an expert in the feeding of babies should have charge of the diet. It may require some coaxing to establish the child's life on a certain basis. Rectal feeding may be needed for a few days after operation. The baby should be kept absolutely quiet and not handled unnecessarily. One operator thought the baby might be operated on and then carried home in the arms of its mother, several miles into the country. This was not done, however,

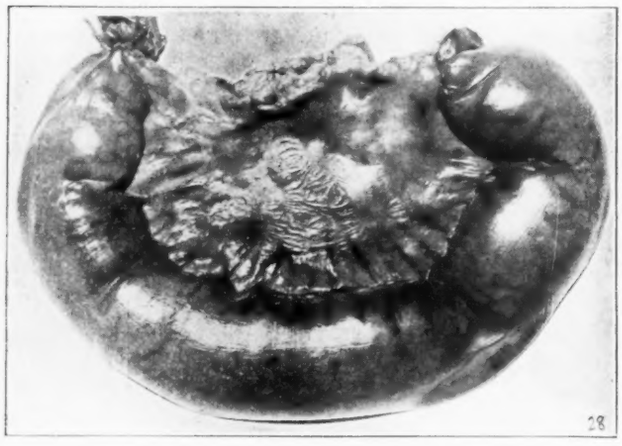

Fig. 18.—The intestine of the adult and of the infant with its mesentery intact. Photographed to similar scales. Note the relative short mesentery of the infantile intestine.

and after the operation it was doubtful for a day or two whether the baby would live or die. The baby lived, but had it been carried immediately home from the hospital it probably would have died. These matters seen ordinary and of minor importance, but they are vital, and it is the attention to all little details which sometimes turns the scales.

I have purposely avoided a discussion of the etiology of this affection because I feel that it is still on a theoretical basis. Little of practical value can come from such a discussion at present. Suffice it to say that there are three theories suggested:

1. That the hypertrophy of the pylorus is a primary congenital overgrowth of the sphincter muscle. This view is entertained by Nicoll.

2. Thomson believes the hypertrophy to be secondary to an incoördinated action of the stomach muscles, dependent on functional disorders of the gastric nervous system, resulting in gastric spasm.

3. The hypertrophy, according to Pfaundler,[12] is due to a spasmodic contraction because of gastric irritation after birth. There are many facts supporting these views. All agree, however, that there is hyperplasia of the circular pyloric fibers. Why and where this hyperplasia occurred it is impossible to determine at present. The discussion is fascinating, but at present unprofitable.

We may accept as true the evidence of the existence at birth of hyperplasia of the pyloric sphincter. I think also that from clinical evidence we may accept as true the fact that after birth there is often, if not always, a spasmodic contraction of this hypertrophied pylorus. More than this we can not accept on the present evidence. I have avoided using the term "congenital hypertrophy" because it involves the etiologic factor. I think that the term "pyloric stenosis of infancy" implies nothing not yet proved; it seems, therefore, to be the better term.

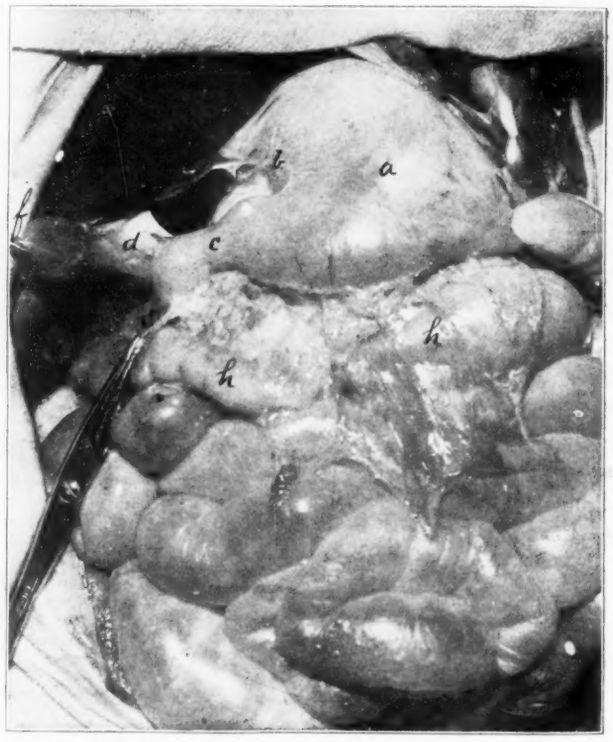

Fig. 19.—Autopsy photograph of a child about 1 year old. Note: (*a*) stomach, (*b*) lesser curvature, (*c*) pylorus, (*d*) gastrohepatic ligament, (*e*) great omental border, (*f*) gall bladder, (*h*) transverse colon.

Our idea of the prognosis of these cases of pyloric hypertrophy is not influenced in the least by the hypothesis we may entertain of the etiology. There is as yet no evidence that patients said to have recovered under medical treatment had this disease. There are cases, already referred to, however, in which the diagnosis of pyloric stenosis had been made, and in which a cure was supposed to have taken place. These patients subsequently died and autopsy demonstrated that the stenosis had persisted after the supposed cure.

Monnier[40] thinks that the mortality without operation is about 80 per cent. If the truth were known I am persuaded that the medical mortality would be above this figure.

40. Monnier: Deutsch. Zeits. für Chirurg., 1901.

When should the physician summon the surgeon? As soon as the diagnosis is made, and before the diagnosis is made in all doubtful cases. When an infant persistently vomits and does not improve after a fair experimentation with feeding in the many ways known to the skilled pediatrist, the case should be regarded with suspicion and pyloric stenosis considered. The physician and surgeon should work over these cases together. The physician, by being keenly alive to the existence of the affection which is no longer a medical curiosity, but is more common than has been supposed, should contribute his accurate observations to a clearer knowledge of the disease. The surgeon, realizing the difficulties of diagnosis, should approach a possible case of the affection with discrimination, being careful not to operate unnecessarily.

The surgeon should not operate because the medical attendant brings him a case which he thinks needs operation. The surgeon should operate only after personally weighing the evidence and being convinced by it.

The pathologic evidence conclusively demonstrates the uniformity of the lesion. The clinical evidence associates with this lesion a typical and an atypical symptomatology. Medicinal treatment has yet to demonstrate its power to cure this affection. Surgery, on the other hand, has proved its ability under adverse circumstances to cure more than one-half the cases entrusted to it.[41]

41. Other references consulted are the following: Bernheim: Karr. corresp. bei f. Schw. Aertz., 1904, xxxiv, p. 257. Blachadder: Brit. Med. Jour., 1901, vol. i, p. 765. Clogg: The Pract., November, 1904. Cleveland: Brit. Med. Jour., 1904, vol. i, p. 1073. Dent: Brit. Jour. Chil. Dis., 1904, vol. i. Dorning: Arch. Ped., September, 1904, p. 681. Elting: Albany Med. Ann., January, 1905. Fritzche: Dis. Zurich, 1900, p. 156; Centlbl. f. Chir., 1901, p. 119. Fenwick: Disorders of Digestion in Infancy and Childhood, 1897. Fletcher: Trans. Path. Soc. London, vol. l, 1899. Freund: Mitt. a. d. Grenz. Med. Chir., 1903, p. 309. Flynn: Australasian Med. Gaz., December, 1902; Münch. med. Wochft., 1903, No. 29, p. 1274. Fisher and Neild: Bristol Med.-Chir. Journal, 1904, vol. xxii, p. 123; Centbl. f. Chir., vol. xxxii, p. 945. Giles: Australasian Med. Gaz., Aug. 20, 1904. Granboorn: Monatsch. f. Kindhk., No. 3, 1902. Guthrie and Murray: Reports of the Society for the Study of Diseases in Children. Gran: Jahr. f. Kindhk., vol. xliii, 1896, p. 118. Hammer: Prag. med. Wochft., 1899, No. 3, p. 25. Herman: Arch. Ped., January, 1901, p. 293. Henschel Arch. f. Kindhk., 1891, vol. xiii, p. 32. Ibrahim: Münch. med. Wochft., 1903, No. 31, p. 1359. Kehr: Verhand der Deutch. Gesellschaft f. Chir., 1900, vol. i, p. 124. Knoepfelmacher: Wein. klin. Wochft., Dec. 20, 1900. Koplik: Diseases of Infancy and Childhood, Lea Bros., New York, 1902. Lange: Münch. med. Wochft., 1901, No. 7, p. 280. McCaw and Campbell: Brit. Med. Jour., June 25, 1904, p. 1483. Nordgren: Münch. med. Wochft., 1903, No. 4, p. 179. Neurath: Centbl. f. d. Grenz. Med. Chir., 1899. Pedden: Trans. Glasgow Path. and Clin. Soc., 1892. Pitt: Trans. Path. Soc. London, 1892, vol. xliii, p. 63. Rivière: Lancet, 1902, vol. ii, p. 1750. Rolleston and Hayne: Brit. Med. Jour., April 23, 1898. Schmidt: Arch. f. klin. Chir. v. Langenbeck, vol. lxiii, 1901, p. 977. Selter: Monatsch. f. Kindhk., No. 6, 1902. Schultze: Proc. New York Path. Soc., 1901, p. 80, N. S. T. Simonsohn: Diss. Greefswald, 1903, p. 38. Southworth: Arch. Ped., January, 1901. Trantenroth: Centbl. f. Chir., No. 38, 1902, p. 1004. West: Arch. Ped., 1903, p. 750. Weill and Pehn: Lyon Medicale, Dec. 9, 1900, p. 505. Wachenheim, F. L.: Amer. Jour. Med. Sciences, April, 1905, p. 636. Ibrahim: Die Angeborene Pylorustenose im Sauglingsalter. George F. Still: London Lancet, March 11, 1905, p. 632.

Facts About Portland, Oregon.—Portland is the principal city of the northwest coast. The chief export commodities are lumber, flour and grain. The city does a wholesale business of $175,000,000 annually, and the product of its factories was $50,000,000 last year. The name of the "Rose City" has been given this western metropolis on account of the large number of beautiful roses that are constantly in bloom here all the year round. The climate is exceptionally mild on account of the warm currents of the Pacific Ocean. It is the first rank of American cities for health, the death rate being only 9.5 per 1,000 of population.—*Sunset Magazine.*

ANKYLOSIS.

ARTHROPLASTY—CLINICAL AND EXPERIMENTAL.

JOHN B. MURPHY, M.D.,
CHICAGO.

(*Concluded from page 1678.*)

CASE 8.—Mr. Z.; Bohemian, aged 26; was admitted to Mercy hospital April 19, 1904.

Present Illness.—Patient does not speak English and it was impossible, therefore, to obtain a perfectly accurate history. Through an interpreter he stated that stiffness in the right elbow began to develop about ten years ago, and progressed steadily until the joint was completely ankylosed at a right angle. He stated positively that there was no acute inflammation in the joint at any time, and that he had never injured the elbow. From his statement it would seem that the lesion was from the first an ankylosing arthritis. No other joints

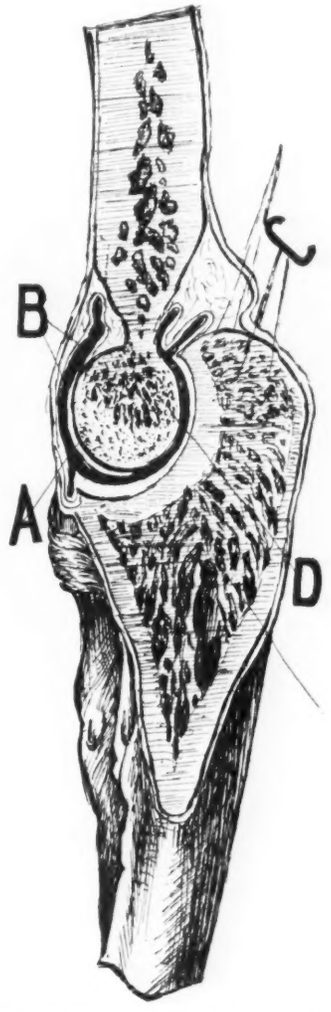

Fig. 29.—Case 8: Showing disposition of synovial membrane in elbow joint (Toldt).

were involved and his general health was good. He gave no history of tubercular or of specific trouble.

Examination.—The patient is of medium stature, rather poorly nourished. The right forearm was flexed at a right angle, and there was absolutely no motion in the elbow joint. The muscles of the arm were atrophied to an extreme degree from non-use, as were those of the forearm, though to a lesser degree. No swelling existed about the elbow joint, except over the articular surface of the radius, where the bone was somewhat thickened. The olecranon fossa was partly filled by bony deposit.

Operation.—April 20, 1904, Esmarch's constrictor was applied to the arm. A vertical incision 6 inches long was made on the posterior surface of the right elbow directly over the

olecranon. It extended from two inches below the tip of the process to 4 inches above it, and exposed the surface of the olecranon and the deep fascia, covering the triceps. The skin and subcutaneous fat were dissected laterally from the bone and fascia for 1½ inches on each side of the incision, and the edges of the wound were widely retracted. A pyriform flap of the deep fascia was dissected from the posterior surface of the triceps. The flap was 4½ inches long by 2½ inches wide at its upper end, and received its blood supply through a broad pedicle which remained attached to the muscle and fascia just below the level of the tip of the olecranon. By means of a long curved needle threaded with a heavy silk carrier, a wire-saw was passed around the base of the olecranon and the latter severed from the ulna. The bone was sawn through in an oblique direction from within outward, in order to secure broad bony surface for subsequent union. After separating with chisel and mallet the bony connection between the olecranon and the humerus, the former with triceps attachment undisturbed, was retracted upward and the interior of the joint exposed. Examination showed firm bony ankylosis which involved the entire elbow joint. The synovial membrane and cartilage had been destroyed, and not a vestige of them remained. The union was firmest between the external condyle and the head of the radius, where in addition to the osseous tissue connecting the articular surfaces, exostoses from the margin of the radial head surrounding the condyle. The bony adhesion between the head of the radius and the lesser sigmoid cavity was separated with the chisel, the coronoid process was liberated from the trochlea in the same manner, and the bony deposit which filled the olecranon depression was removed with the curette. The exostoses were then cut away from the head of the radius and the head itself was reduced to its normal size with bone cutting forceps. Its connection with the external condyle was then severed and all of the articular surfaces were smoothed off. The flap of fascia was drawn downward and turned into the joint around the inner margin of the olecranon. The proximal portion of the flap covered the trochlea and lined the olecranon depression and the lesser sigmoid cavity, while the distal portion covered the external condyle. The margin of the flap was secured to the capsule of the joint on all sides with interrupted catgut sutures and the olecranon was brought into position, and wired to the ulna with aluminum-bronze wire. The ulna nerve, which had been displaced at the beginning of the operation, in order to protect it from injury, was replaced in its groove. Subsequent events show that the fascial flap was not carried sufficiently high on the anterior surface of the humerus to permit of adequate flexion of the joint. (Note the disposition of the synovial membrane of the elbow joint as seen in Fig. 29 and the axis of rotation as seen in Fig. 30.) To prevent adhesion of the triceps muscle to the lower end of the humerus, the deep portion of the common tendon of the triceps was folded together and sutured longitudinally to form a rope-like mass. The edges of the fascia on the posterior surface of the muscle were drawn together as closely as possible to prevent adhesion of the muscle to the skin.

Passive motions of the elbow were now performed and the muscles were stretched to allow a free flexion and extension. The skin incision was closed with silkworm gut and horsehair, and the wound was drained with a small rubber tube at its lower angle. The elbow was immobilized at a right angle in an external plaster cast.

Result.—A mild degree of superficial infection developed a few days after the operation and caused a slight evening elevation of temperature. It was not necessary to reopen the wound on this account as the retained seropurulent fluid escaped through the sutures. The sutures were removed on the tenth day, and the elbow was put through passive motions every day after this. (Figs. 31 and 32.)

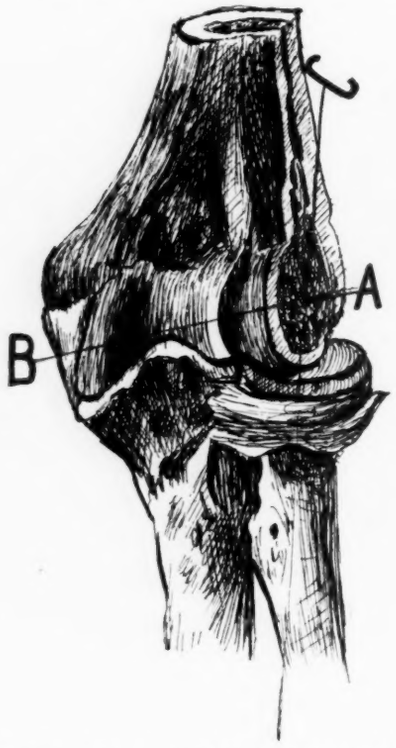

Fig. 30.—Axes of rotation in elbow joint.

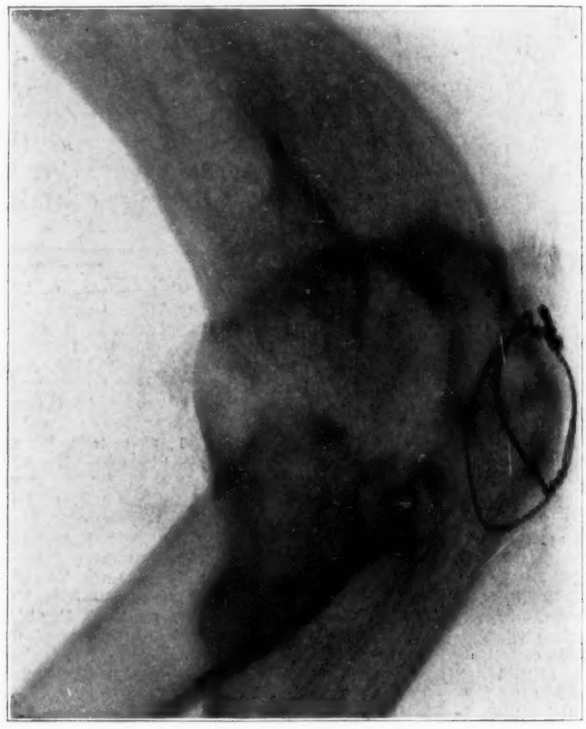

Fig. 31.—Case 8: Radiograph of right elbow after operation.

Sept. 17, 1904: He can now pass the hand through an arc of 5 inches. Pronation and supination are about one-half the normal degree. There is no swelling of the joint. The biceps and triceps which had atrophied from non-use are slowly developing.

CASE 9.—Mrs. S. S., aged 29; was admitted to Mercy hospital June 21, 1904.

Family history is negative.

Previous History.—"Scarlet fever and measles" when a child. Never pregnant.

Present Illness.—Ten months previously the patient had an attack of "acute rheumatism" which involved in rapid succession the joints of the fingers, left elbow, both knees, ankles and the right wrist. All these joints were swollen, painful and tender to pressure for three weeks, during which time her temperature ranged from 101 degrees to 103 degrees F. The temperature then became remittent, but the arthritis, partic-

ularly in the left elbow and the right knee, remained active for 4 months from time of onset. The trouble then gradually subsided leaving all the joints normal, except the left elbow and right knee, which were firmly ankylosed, the former slightly flexed and the latter extended. At present, her general health is good but still has some pain in the knee and elbow.

Examination.—The patient is of small stature; fairly well nourished. The left elbow was firmly ankylosed in a slightly flexed position and permitted of absolutely no motion (Fig. 33). There was no swelling about the joint. The right knee was extended and fixed but allowed of slight passive motion between the femur and tibia. The patella, however, was united to the femur by bony ankylosis.

Operation.—Left elbow was operated on June 22, 1904. Arthroplasty was performed after the method described under Case 8. As the superior radio-ulnar joint was not ankylosed it was not necessary to place the fascia in this situation. Care was taken to cover the entire articular surface of the lower end of the humerus with the fascial flap. The capsule of the joint was not removed. (Fig. 34.)

The elbow was put through passive motions to stretch the muscles; the skin incision was closed with horsehair and the

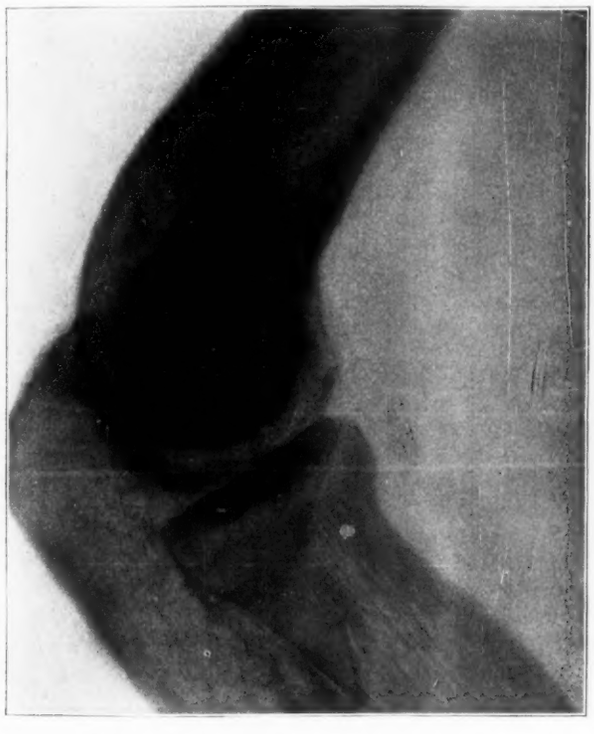

Fig. 32.—Case 8: Normal left elbow joint.

elbow was immobilized at a right angle in a posterior plaster cast, which extended from the shoulder to the wrist.

Result.—Wound healed by primary union and the sutures were removed July 2. Passive motions were begun on the fifteenth day and were performed daily thereafter. The cast was removed on the twenty-first day. She left the hospital July 29, 1904. (Figs. 35 and 36.)

Sept. 22, 1904: Active motion carries the hand through an arc of three inches without pain. The elbow can be forcibly flexed to an acute angle and extended to 160 degrees. Supination and pronation are rapidly approaching the normal. There is no swelling or edema about the joint.

CASE 10.—Mr. H. B. D., aged 26, lineman; was admitted to Mercy hospital Sept. 14, 1904. Family history is negative.

Previous History.—"Typhoid fever" many years ago. "Rheumatism" 15 years ago. Three attempts have been made under anesthesia to restore motion, and in one attempt the ligamentum patellæ was ruptured. All were unsuccessful.

Present Illness.—Thirteen months previously in the third week of acute gonorrhea, the patient's left knee suddenly became swollen, painful and tender. The pain was very severe and as no improvement followed rest, hot applications, etc., a plaster cast was applied, which immobilized the knee in full extension. He was confined to bed 3 months and the cast remained on 4 months. When it was taken off the knee was stiff and attempts at active or passive motion were very painful. The stiffness and pain have persisted up to the present time and he is incapacitated.. All treatment has been without effect.

Examination.—The left knee was flexed at an angle of about 5 degrees. It was slightly swollen and tender to pressure around the line of the joint. The patella was firmly ankylosed to the femur and could not be moved independently. The ankylosis between the femur and the tibia was apparently fibrous, as a very slight degree of motion was present.

Operation.—Sept. 17, 1904, Esmarch's constrictor was placed around the middle of the thigh. A transverse incision was made extending from the inner to the outer condyle across the center to the left patella. The patella was sawn

Fig. 33.—Case 9: Radiograph of left elbow before operation. Osseous tissue fills the joint and unites the bones.

through transversely, its lateral ligaments were divided and the bony union to the femur was separated with chisel and mallet. The two fragments were then retracted upward and downward respectively, exposing the interior of the joint. Dense fibrous tissue united the femur and tibia over the entire articular surface and the capsule of the joint was greatly thickened. The capsule was divided in a posterior direction on each side, and the bones were freed from each other by forcibly flexing the leg on the thigh. The anterior crucial ligament was ruptured when the leg was flexed, but the posterior ligament remained intact. A flap of the fascia lata and adipose tissue covering the vastus externus, was then dissected from the muscle leaving a broad pedicle attached just about the joint level. Before turning the flap into the joint the entire capsule, lateral ligaments and periarticular tissue were removed (except from the posterior margin) down to the attachment to the bone. The flap was then turned in between the bones and the entire articular surface of the femur was covered by it. It was large enough to overlap the articular

surface and to permit its free border to come well up on the shaft of the bone, where it was secured to the periosteum with interrupted catgut sutures (Fig. 37).

The leg was then extended and the upper and lower halves of the patella were united by a mattress suture of heavy aluminum wire in the bone, reinforced by interrupted kangaroo tendon sutures in the periosteum and patellar aponeurosis. The skin incision was closed with silkworm gut and horsehair. Tubular drainage was used. An anterior plaster cast immobilized the knee in full extension. A Buck's extension was applied on the tenth day and slight passive motion was instituted (Figs. 38 and 39).

Result.—Dec. 1, 1904. Patient is able to walk without cane or crutch, though he uses a cane if on his feet for a long time. Motion in the knee joint is perfectly free to the extent of 15 degrees and this is increasing daily. The patella is freely movable.

CASE 11.—Mr. A. W. D., aged 29 years, conductor; was admitted to Mercy hospital Oct. 27, 1904. Family history is negative.

Previous History.—He had acute appendicitis terminating in localized abscess 3 months ago; the abscess was opened and drained.

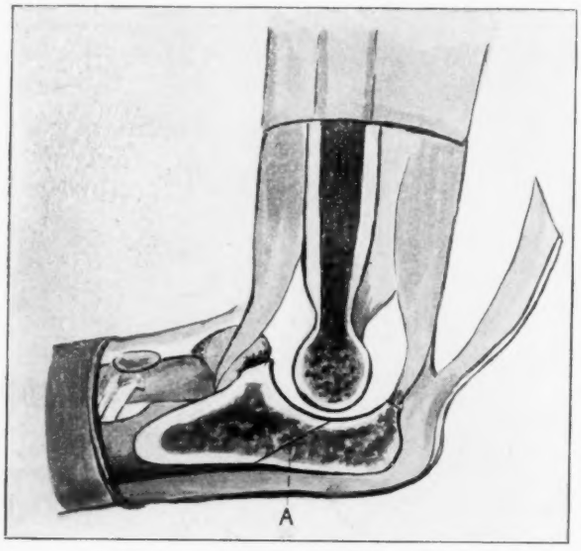

Fig. 34.—Sagittal section through elbow joint. Olecranon is detached from ulna through oblique line. (A) Fascial flap shown with pedicle below.

Present Illness.—Fourteen months ago the patient fell under a moving freight car and was rolled a distance of ten or twelve feet. The wheels did not pass over him, but he sustained the following injuries: (a) Severe contusion and laceration of the soft tissues about the right knee, especially on the outer aspect. The knee joint was opened, but no bones were fractured. (b) Radius and ulna were fractured at about the middle. (c) Right shoulder was severely contused. Suppuration developed in the right knee joint and he was confined to the hospital for 8 months. When he left the hospital the suppuration in the right knee had ceased and the wound was healed, but the patella was firmly fixed to the femur by bony union, the tibia was subluxated posteriorly, and he was unable completely to extend the leg on the thigh. Flexion in the knee was limited to 10° or 15°, and he could not support the weight of his body on the right limb. Owing to the malposition of the leg and foot during the time he was confined in bed, he had a pronounced drop foot which added to the difficulty in walking and standing. Eleven months after the accident the adhesions in the right knee joint were broken up by forcible manipulations. Since then there has been a little more motion in the knee, but he is still obliged to use crutches in walking.

Examination.—There is a scar above right Poupart's ligament where appendiceal abscess was drained. The right radius and ulna were fractured in middle third and fragments were united by fibrous tissue. Right leg was flexed on the thigh at an angle of 140°, and could not be extended beyond this angle. He could flex the knee through an arc of about 20°. The muscles of the right thigh and leg were weakened from disuse. The tibia was subluxated posteriorly and the hamstring muscles permanently shortened. The patella was fixed to the femur by bony union and permitted of absolutely no motion. Marked foot drop existed, the contracted posterior muscles preventing flexion of the foot to a right angle.

Fig. 35.—Case 9: Radiograph of left elbow after operation, showing distinct line of separation between humerus and ulna.

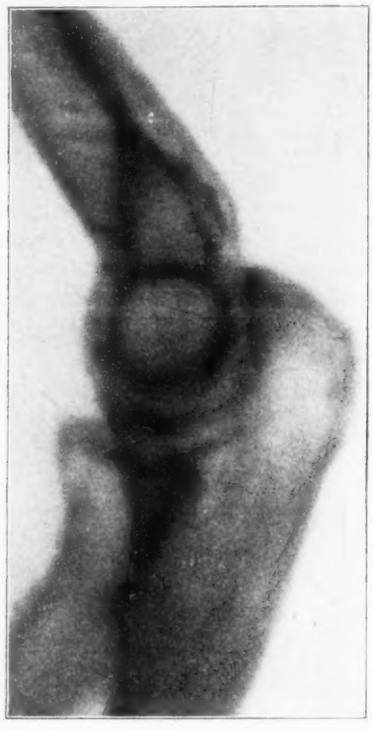

Fig. 36.—Case 9: Radiograph of normal right elbow. The line of separation between humerus and ulna is no more distinct than in Fig. 28.

Operation.—Oct. 29, 1904; Dr. J. M. Neff. The inner and outer hamstring tendons were elongated by tendinoplasty; a U-shaped incision was made around the patella, as in Case 1; the ligamentum patellæ were divided transversely and the joint was opened on each side. The capsule on each side of the patella was incised and removed, after which the leg could be flexed to a right angle without difficulty. There was bony union of the patella and femur. The capsule of the joint was thickened and the synovial membrane was hypertrophied; the tibia was subluxated posteriorly; the synovial membrane and articular cartilages of the knee joint proper were normal, except anteriorly, where the capsule was adherent. The patella was chiseled free from the femur through the line of union between the two bones, and the roughened surfaces were smoothed with bone-cutting forceps; the patella was then retracted upward. A horseshoe-shaped flap, with its pedicle attached just above the knee joint, was cut from the fascia lata,

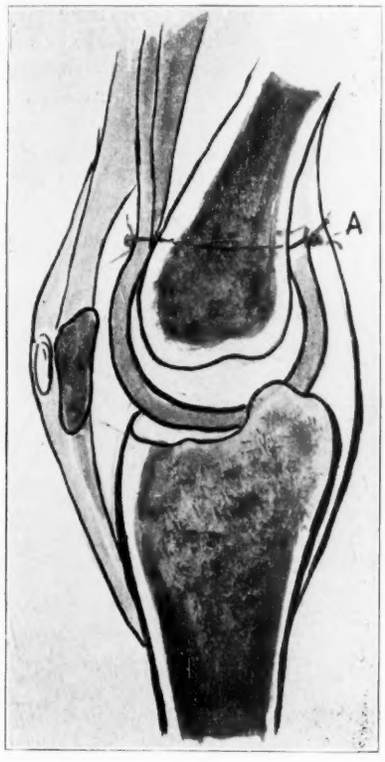

Fig. 37.—Case 10: Sagittal section through knee joint, showing entire articular surface of femur covered by fascial flap, which is sutured to periosteum at A.

which covered the vastus externus, and a similar but smaller flap was cut from the fascia covering the vastus internus. The outer and inner flaps were then turned in between the patella and femur to cover the articular surfaces, and the upper edges of the flaps were sutured to the periosteum on the anterior surface of the femur. The opposing edges were sutured together in the median line and the lower edges were sutured to the crucial ligaments. Kangaroo tendon was used. The patella was then brought down to its normal position and secured to the ligamentum patellæ with heavy kangaroo tendon. These were reinforced by sutures approximating the patella aponeurosis; no drainage was used. The patient was returned to bed and the limb was placed in a box.

Result.—The next morning, October 30, he complained of severe pain and tenderness in the right lower quadrant of the abdomen, and at 4 p. m. his temperature registered 102.6 F. and his pulse was 136. The diagnosis of recurrent acute appendicitis was made, but operation was deemed inadvisable under the circumstances. The pain and tenderness in the right iliac region subsided gradually and temperature became normal November 12. On November 2 the right lower limb was placed in a straight fracture box and Buck's extension of 10 pounds was applied to the leg. The wound healed by primary union and the sutures were removed November 12. Continuous extension was used until December 2, when the patient was allowed out of bed for the first time. The posterior subluxation of the tibia, which was so pronounced before the operation, gradually lessened under the traction and was almost entirely reduced when the extension was discontinued. Passive motions of the patella and the knee with massage were given daily after the first week. December 10 the patient was able to bear his entire weight on the limb, but used crutches in walking. The posterior subluxation was almost entirely reduced and the leg could be extended within 5° of the normal. Motion in the knee joint was perfectly free, though somewhat limited, as a result of the prolonged traction and non-use. The patella is free from the femur and allows of a considerable degree of lateral passive motion (Fig. 40).

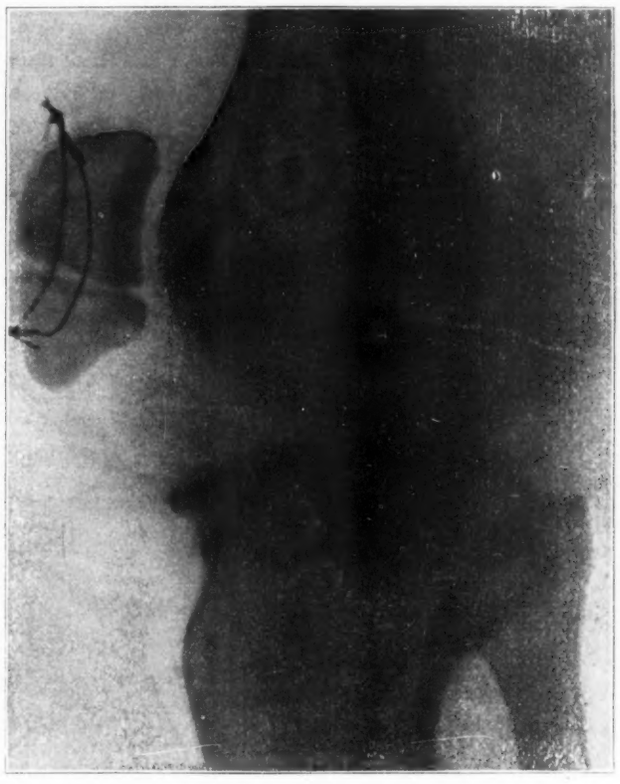

Fig. 38.—Case 10: Radiograph of left knee two months after operation. Line of separation between patella and femur is distinct.

CASE 12.—Miss M., aged 29, was admitted to Mercy Hospital Jan. 3, 1905. Complete ankylosis of elbow joint following a compound fracture, with infection. The ankylosis was complete since 1893. There was pronounced atrophy of biceps and triceps; also of pronators and supinators. The details of operation were the same as those of previous operations for elbow ankylosis, except that the lower end of the humerus was reduced in size and the interarticular flap carried with it more of the fatty tissue. There was primary union, and ten days later passive motion was instituted (Figs. 41 and 42), four-fifths normal motion. There is not the slightest pain or discomfort in putting through this degree of motion, and the muscles of the arm have rapidly developed. Pronation and supination are limited. This is not a flail joint, but a typical anatomic complete joint.

Dr. Wm. Dow, Regina, Canada, in a communication dated Feb. 26, 1904, writes as follows concerning a case on which he operated after my plan on Jan. 2, 1904. (The case was one of double-hip ankylosis from tuberculosis.) "I may not have made plain my use of the fascia in description of my operation, ankylosis from tuberculosis of the hip. I stripped down the fascia from the skin and fascia flap in the manner I

saw you do, cutting some fibers of gluteus maximus muscle to place it round the head (end of neck, as head was gone from necrosis), and stitched it to original capsule around neck of bone on as much of neck as contained original capsule, thus surrounding the end of the bone with the fascia lata. The end of bone was smoothed with bone forceps, and the fascia when brought down was made to surround it and was stitched as described, only at upper part of neck I had no original capsule and stitched part to tissues to help hold it down in place. The end of bone was encapsulated with the fascia, and I think it will be all right. There is still a very slight serous discharge, but there is considerable degree of motion at hip and the thigh is filling out. It is now much larger than the opposite thigh. His pulse has slowed some lately. Temperature remains normal. I think I will remove the extension entirely in a few days and will try him on his feet in a week if serous oozing ceases. Will send report of his condition at a later date."

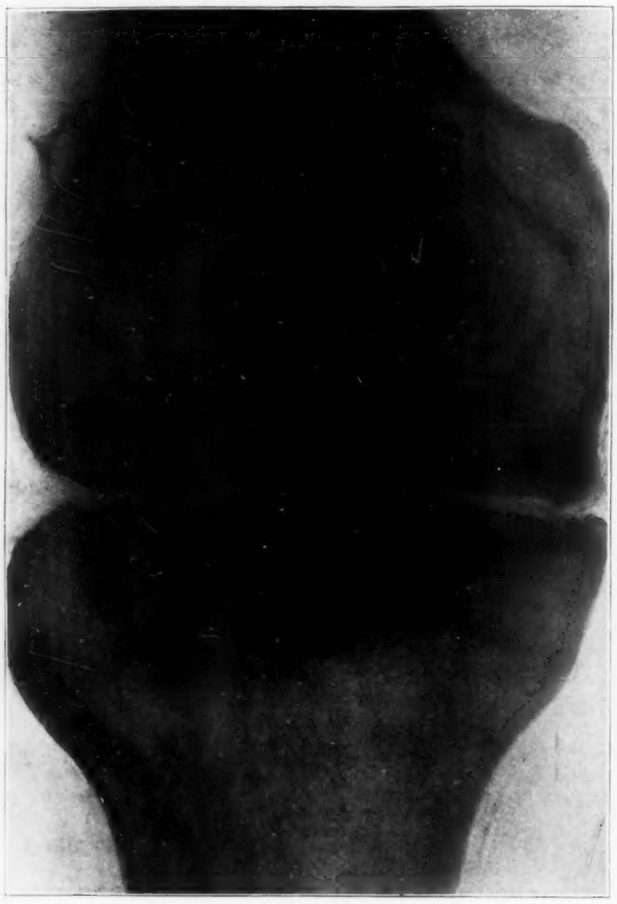

Fig. 39.—Case 10: Radiograph of left knee two months after operation; anterior view. Joint cavity is free and articular surfaces of perfect conformation.

Report of case Dec. 20, 1904: The motion in hip is very good; he can take a very fair step now and can raise the leg up about a foot when standing and can place it over the knee of opposite leg when seated. He uses a crutch and cane when out of doors, but can walk a little in room with one cane alone. There is no pain in that hip or leg. There is 1½-inch shortening, but it was that much shorter than its fellow before operation.

The history of the formation of new joints begins with J. Rhea Barton,[15] of Philadelphia. To him belongs the honor of the first attempt (in 1826) to rectify an angular, true ankylosis of the hip joint by osteotomy. Briefly, his operation consists in incision of skin and muscles and division of bone through the great trochanter and a part of the neck of the femur; then preventing bony union by movements, which will induce ligamentous attachment only.

Dr. J. Kearney Rodgers, of New York, modified his operation in 1830 by removing a disc of bone from between the trochanters.

In 1838 A. Bérard,[16] writing on ankylosis of the temporomaxillary joint, advised the method of Rhea Barton—section of condyles and prevention of bony union by means of motion, in order to form a false and new joint.

John Murray Carnochan, of New York, claims to have performed, in 1840, for the first time, an operation in order to establish a new joint, formation of a "maxillary pseudarthrosis." In operating on a case with ankylosis of the temporomaxillary joint he fractured accidentally the maxillary, which suggested to him later the advantage of dividing the maxillary in order to create a pseudarthrosis of the maxillary joint. In this case he tried to prevent bony union by interposing a piece of wood between the cut bony surfaces. He also advised the patient to chew. The technic followed by Carnochan consisted of division of the temporal and masseter tendons, section of the ramus, and prevention of bony union by interposing cotton. (The bone should be divided through the mouth).

Fig. 40.—Case 11: Radiograph of right knee five weeks after operation. Patella is perfectly free and posterior subluxation is almost entirely reduced.

In his "Lectures on Surgical Anatomy and Operative Surgery" he showed that in some cases of ankylosis of the temporomaxillary joint subcutaneous tenotomy of the masseter and temporal is practicable and rational.

Dieffenbach,[17] in his operative surgery, mentions the treatment of ankylosis of the temporomaxillary joint by "section of bones." On page 774 of the same work he

15. North: Amer. Med. and Surg. J., 1827, p. 290.

16. Bérard, A.: Dict. de Med. en 30 vols., xviii, p. 440, 1838.

17. Dieffenbach: Operative Surgery.

advises section of the masseter and formation of a new joint in cases of ankylosis of the temporomaxillary joint.

Esmarch is one of the surgeons who also recommends the creation of a pseudarthrosis in ankylosis of the temporomaxillary joint. He advises surgical intervention only in cases where the immobility is due to cicatricial tissue; in other words, he does not operate on joints with any structural changes.

In his thesis Charles Richet[18] advises the following technic in cases of ankylosis: Longitudinal incision of

Fig. 41.—Case 12: Shows degree of voluntary extension.

periosteum, which is denuded and preserved "in order to form the new articular capsule." He then divides the bones and advises the patient to chew, so as to prevent bony union.

Rizzoli and A. Verneuil[10] restored motion—the former in three cases, the latter in one of temporomaxillary ankylosis—by section of both extremities and prevention of union by movements. The result was a pseudarthrosis.

FORMATION OF NEW JOINTS BY MUSCULAR INTERPOSITION.

Recently the ankylosis of joints has been corrected by osteotomy, followed by muscular interposition. Nélaton[19] reports two cases overcome by this method. The first case was one with double ankylosis of hip joint, following articular rheumatism. The patient was unable to walk or to stand up. An operation was performed as follows: Antero-external incision of skin, section of muscles and capsule; extrusion of the head of femur; enlargement of cotyloid cavity. Next Nélaton interposed between the head and acetabulum a strip of fascia lata, 2 fingers in width and 5 inches long. Then suture of muscles with catgut and of skin with horsehair. The corresponding leg was extended by weights of from 10 to 12 pounds. Union was obtained in 15 days, and two months later the patient was able to walk. On examining the patient two years later Nélaton found all the movements free and painless, though the patient walked more or less like an individual with congenital dislocation of the hip.

The second case was that of a young man, 29 years old, who had suffered from acute and generalized rheumatism, followed by ankylosis of both hip joints and of

Fig. 42.—Case 12: Shows degree of voluntary flexion.

the lumbar spine. The thighs were flexed on the pelvis (50°) in slight abduction, and the knees were separated by a distance of 8 inches. An incision one inch in length was made on the antero-external margin of the great trochanter; the muscles and capsule were incised; the neck and head of femur were extruded; the old cotyloid cavity was enlarged by scissors; a piece of fascia lata of from 14 to 15 inches was interposed between the head of the bone and the cavity. Healing was obtained in three weeks. The movements of the new joint were very good, but, on account of the pressure exerted by the traction apparatus, the patient developed an eschar at the head of the fibula, followed by paralysis

18. Richet: Thèse de Concours; Des Operations applicables aux Ankyloses.

19. Nélaton: Bull. et Mem. de la Soc. de Chirurgie, 1902, p. 687.

of the external popliteal nerve, which, of course, made extension of the foot impossible. Nélation says in his report: "I believe muscular interposition is the strongest medium that we possess in order to combat bony ankylosis of a joint."

A case of ankylosis of the shoulder joint was treated by muscular interposition by M. Coville (case reported by Nélaton). A young woman, 22 years old, had absolute ankylosis of the shoulder joint, following trauma. On May 19, 1903, Coville made a 4-inch incision, starting below the clavicle and passing externally to the coracoid process; then down the arm, following the fibers of the deltoid. The muscle was incised outside of the groove separating it from the pectoralis. The head of the humerus was extruded and divided at the level of the anatomic neck. The long strip of the deltoid was cut transversely, the superior part being left adherent. A piece of 4 inches, obtained by the transverse section, was interposed between the surface of the humerus and glenoid cavity. Coville perforated the capsule with a probe so as to prevent wounding the

Fig. 43.

Fig. 44.

Fig. 43.—Case 12: Radiograph shows position of bones in voluntary flexion. It will be noted that the tip of the olecranon still hugs the humerus, although three-quarters of an inch lower than in the extended position. Radiograph was made three and a half months after operation.

Fig. 44.—Case 12: Radiograph shows position of bones in voluntary extension. The bones slide on each other in the normal way. The bronze wires are still in place. Radiograph was made three and a half months after operation.

musculo-spiral nerve. A counter incision was made at the same level and a thread passed through this opening, surrounding, in the form of a loop, the extremity of the muscular strip, and by tightening it applies the muscle in the articular cavity. Three days later movements of the new joint were performed.

The result was good; the woman was able to sew (she was a tailoress), but abduction was limited.

Berger[20] reports the following case: The patient suffered from ankylosis of the elbow joint of several years' standing, for which amputation had been advised. Three cm. were resected from the humerus and 2 cm. from the ulna. A piece of the olecranon, covered with periosteum, was left in order to preserve the insertion of the triceps. The extremity of the humerus was carefully rounded, so as to imitate the normal form. In order to assure mobility of the new joint and to prevent return of the ankylosis, Berger placed between the bony extremities a piece of muscle taken from the pronator radii teres, which was fixed by several sutures to the brachialis anticus. He attributes the good result which he obtained to the muscular interposition.

In addition to attempts to overcome the ankylosis, some authors have tried to correct the defect by interposing soft tissues between the bony surfaces.

Föderl, for example, experimenting on animals, found that he could restore the motion in the temporomaxillary joint, ankylosed after resection, by interposing between the bones, animal membranes, such as pieces of bladder or the wall of ovarian cysts.

Chlumsky[11] restored motion in ankylosis, following experimental resection in animals, by first covering the bony extremities with collodion and then interposing between them plates of celluloid, silver, tin, rubber, etc. The animals were able to move their joints just as well as before the operation. Later he used plates of magnesium.

Some surgeons advise another operation for ankylosis. T. Wolff reported 9 cases of ankylosis in 1895 and 1897 in the *Berliner Chirurgen Vereinigung*. He made use of "arthrolysis:" section, chisel and excision of all the fibrous tissue which hindered movement. The operations were followed by good results.

Eiselsberg reports good results in only one of the two joints in which he used the same method. Kocher, while in favor of arthrolysis, modifies it by putting the bony extremities, after the arthrolysis, in a position of dislocation, which he reduces 8 to 14 days later.

Quénu (Société de Chirurgie, Paris, June 25, 1902) reported a case of ankylosis of the elbow joint treated by interposition of soft tissues after an extensive resection of the bony extremities. He first largely resected the ends of the ulna, the radius and the humerus and then interposed the anterior ligament of the elbow. The result was very satisfactory.

Delbet also praises the method of "muscular interposition" in cases of ankylosis.

In our work we have been able, by the interposition of fascia and muscle, covered with a layer of adipose tissue, to produce normal movable joints, with capsules and collagen intra-articular fluid. This, we believe, is the first systematic production of new and practically normal articulations.

20. Berger: Bull. et Mem. de la Soc. de Chir., 1903, vol. xxix.

The Lewis and Clark Centennial Exposition.—The beauty of the site and the superb view to be had from it are far beyond an adequate description. They must be seen to be thoroughly appreciated. Nestling at the base of the foothills of the Cascade Range, on the gentle slopes and terraces overlooking Guild's Lake and the Willamette River, with an unobstructed view of 65 miles which embraces the snowcapped peaks of Mount Hood and Mount St. Helens, the site presents a picture entirely original in exposition building. One may sit on a commanding roof garden and while dining drink in the pictorial sublimeness of real snow peaks of mountains that rival the Alps in grandeur. Of the gross area of the site, 180 acres are on the mainland and 60 acres form a peninsula extending out into Guild's Lake, a fresh water body 220 acres in extent, which is separated from the Willamette River by a narrow strip of land.—*Medical Examiner and Practitioner.*

ABSENCE OF ARTICULATE SPEECH.

CLASSIFICATION OF ONE HUNDRED CASES NOT DUE TO MECHANICAL FAULTS OR DEAFNESS.

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POLK, PA.

The anxiety often expressed by parents in regard to a child's inability to talk, the number of such cases requiring special care, training and treatment, and the relation of the absence of articulate speech to the child's future development and usefulness, have prompted me to present a classification of cases in which there is absence of articulate speech not due to mechanical faults or deafness, with a few remarks on the most interesting conditions found. The patients are inmates of the State Institution for Feeble-Minded of Western Pennsylvania.

Fig. 1.—Paralytic.

	M.	F.	Total.
Epileptic	10	11	21
Epileptic with cerebral paralysis	8	12	20
Paralytic	6	8	14
Cretin	..	1	1
Genetous idiocy	15	14	29
Microcephalic	5	6	11
Hydrocephalic	1	1	2
Mongolian	1	1	2
	46	54	100

To express ideas in language we must understand the meaning of words and the formation of ideas, and we must have a co-ordinate action of the muscles concerned in speech. In these cases of aphasia one or more of these conditions are absent, with the general absence of the power of verbal expression, depending on cerebral lesions or on the lack of mental development.

The cerebral lesions found in diseases affecting the centers of speech have led many to believe "that in the majority of persons the parts presiding over the faculty of speech are situated at the left side, at or near the third frontal convolution and the island of Reil, parts receiving their blood supply from the middle cerebral artery."

In six cases aphasia was due to lack of memory and ideas, and was apparently caused by frequent and severe epileptic convulsions.

We will first consider aphasia in the epileptic. Most of the cases included are of the grand mal type, having frequent and severe convulsions, with a marked tendency to become more severe as the case progresses. Six boys and eight girls, in addition to epilepsy, have some form of cerebral paralysis (Fig. 1). These cases are mostly congenital and due to faulty intrauterine development or to injury at birth. In 15 cases the convulsions began during the first year and in all before the age of 6. Epilepsy was given in the family history of 3 cases. In the majority of the cases, I do not consider epilepsy to be the direct cause of the aphasia, but that both are expressions of a defective development, and their presence should lead us to make a thorough

Fig. 2.—Cretins.

examination of the organs of speech to eliminate mechanical faults. An unfavorable prognosis should be given as these cases do not respond to treatment or improve under instruction.

PARALYSIS.

In 20 cases cerebral paralysis was the cause of the aphasia, two being marked cases of hemiplegia with inability to co-ordinate the muscles concerned in articulate language. It is of interest to note here the etiology of hemiplegia, "which is considered to be an injury mostly by hemorrhage to the motor region of one side, mainly in that area supplied by the middle cerebral artery."

In cases of aphasia where but one side of the brain is involved, as in hemiplegia, favorable results have followed a systematic training to develop the center of speech on the opposite side of the brain, which has become functionless from lack of use. This treatment should be tried in all cases presenting a possibility of improvement.

There are 6 cases of diplegia and 8 cases of paraplegia and in all the lesions date from birth, none of these ever having been able to speak.

CRETINS.

Absence of or defective speech is so marked in the cretin that this type is often classified from this condition alone. In the cases shown in Figure 2, the one is deprived entirely of language and belongs to the lowest grade of this type; the other can use but a few words.

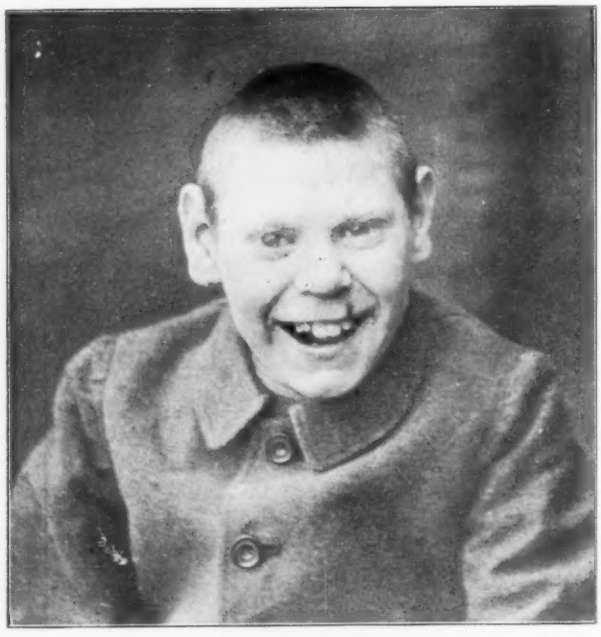


Fig. 3.—Microcephalic.

Fig. 4.—Mongolian.

Cases of genetous idiocy present little of special interest. The lack of articulate speech is only a symptom of their low mental capacity.

MICROCEPHALUS.

The head circumference of all microcephalics included in this table is less than 17 inches, and aphasia is simply due to apraxia (Fig. 3).

HYDROCEPHALUS.

The hydrocephalic type is well illustrated by the following case:

Patient.—E. D., aged 8, had never been able to talk or to walk. The bodily development was slow and at the age of five months excessive development or enlargement of the head was observed. Slow mentation was also noticed early. He was the youngest of seven children; one brother died in infancy, the remaining brothers and sisters are healthy, intelligent and without deformity. No hereditary predisposition to mental or nervous trouble could be ascertained.

Present Condition.—There is marked enlargement of the head, circumference 26 in., antero-posterior diameter 9, transverse diameter 7. The body and limbs are undersized and poorly developed; there is slight anesthesia confined to the lower extremities, which show marked paralysis with rigidity and contractures.

In this case it seems fair to assume that the aphasia was due to the intraventricular pressure, which has injured the cortical areas in each hemisphere.

Clinical Reports

A CASE OF PARALYSIS OF THE RECURRENT LARYNGEAL NERVE,

FROM ANEURISM OF THE ARCH OF THE AORTA.*

HILL HASTINGS, M.D.

LOS ANGELES, CAL.

This case is reported in the interest of laryngology, because of the strong and positive light thrown on the diagnosis by an examination of the larynx. This led to the search for the physical signs of an aneurism of the aorta, which had been overlooked and which might not have been discovered for some time. The history of the case rather inclined toward tuberculosis of the lungs, with secondary laryngeal involvement. It was due to the latter complication that the case was referred for laryngeal examination and treatment. The radiograph of the chest was made to aid in confirming the diagnosis.

Patient.—P. H., 43 years of age, was referred to me two months ago on account of hoarseness. His appearance and voice indicated tuberculosis of the lungs and larynx. The history given at the time was as follows:

History.—Hoarseness was first noticed five or six weeks ago and has gradually grown worse. He had not caught cold, never had had any cough, never spat any blood or any sputum. He has had some shortness of breath; has been a little feverish of nights, and unable to sleep, chiefly on account of the pain in the chest. This pain is referred to the upper sternal region and left shoulder, and later was described as of a severe gripping character, frequently running down the arm. Appetite is poor; no nausea or vomiting; some pain on swallowing; has lost 20 pounds in weight in the past six months. Occupation, waiter; has worked steadily until a few weeks ago. The previous history is negative. Denies syphilis; admits gonorrhea, mild attack when a young man. His habits are good. He is married and has two children.

Examination.—Larynx: Slight congestion of the mucous membrane, but no infiltration, nor ulceration, nor any signs of inflammation. There is complete paralysis of the left vocal cord, which remains in the position of cadaveric rigidity during phonation and respiration. The right cord moves freely, and during phonation extends beyond the mid-line to meet the paralyzed one. No tumor of the larynx or neck is apparent.

Chest: The apex beat is displaced outward, in the fifth interspace 1 cm. outside of the nipple line in the upright position, and 1 cm. within the nipple line, when the patient is reclining. Pulsation in the right second intercostal space, close to the sternum, is distinctly seen when the chest is in the proper light. This pulsation is synchronous with the apex beat. No thrill is felt on palpation. Dullness in the second intercostal spaces, both right and left, is found to the extent of

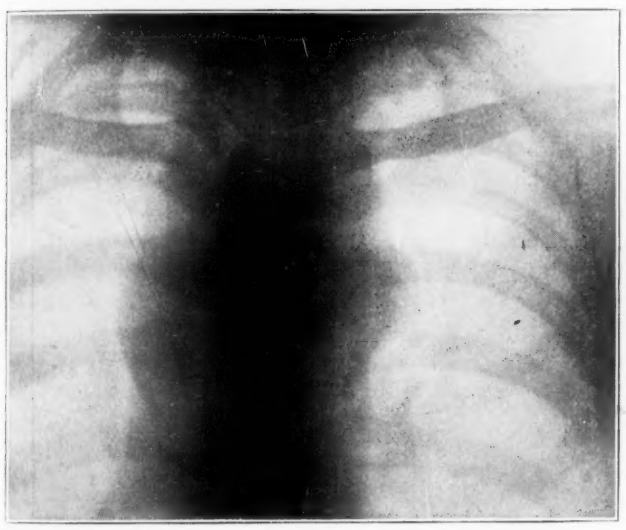
* Presented before the Los Angeles County Medical Society.

two or three cm. on each side of the sternum. Auscultation is negative, except for markedly accentuated second sound at the aortic interspace. No cardiac murmurs and no bruit are heard. The lungs were found to be apparently normal. Tracheal tugging is believed to be present, though it is not marked. The veins of the infraclavicular regions are very slightly enlarged. There is marked difference between the pulsation in the carotid artery, that of the right side being strong and full, while that of the left is weak and small. The difference is perceptible on inspection, as well as on palpation. There is no apparent difference in the radial pulse of the two sides. The pupils are equal.

Diagnosis.—A diagnosis was made of aneurism of the arch of the aorta, pressing on the left recurrent laryngeal nerve.

Skiagraphic Examination.—On the following day an *x*-ray photograph of the chest was made by Dr. A. Soiland. His report is as follows: "The examination with the fluoroscope of the chest of your patient, P. H., shows a shadow about the size of an orange, above the heart and extending on each side of the sternum to an extent of 1½ inches. Pulsation of the shadow is apparent. I am inclined to think that it is an aneurism of the arch of the aorta."

Subsequent History.—The subsequent history has been uneventful, except for some change in the larynx. The hoarseness has increased until he can now speak only in a whisper. The left vocal cord remains in the same position of rigidity, while the excursion of the right cord, during phonation, has



decreased so that it does not meet its fellow. The vocal processes of the two cords almost but do not quite meet during phonation, leaving a space in front and behind, the left edge of which (the free margin of the paralyzed cord) is markedly bowed. On inspiration the right arytenoid and corresponding right cord move outward, while on phonation the right arytenoid is drawn to the opposite one sluggishly. This has been interpreted as due to paralysis of the arytenoideus muscle, which has developed since the first examination.

Marked vicarious action of the false cords is observed. They meet during phonation to the extent of the anterior two-thirds, completely preventing the view of the true vocal cords to that extent. This is believed to be due to excessive action of the thryo-arytenoideus muscles. The veins over the upper part of the chest have become somewhat more prominent, as has also the pulsation in the second aortic interspace. The griping pain referred to the upper sternal region has remained severe and is controlled only by morphin.

The medical profession must begin to get busy in the treatment of their cases. What the people demand is relief or cure of their ills, the quicker the better, and if one does not do something better for them, they are going off into other lines. Diagnosis is essential, and very essential, but after all the ultimate aim of all medical research is the prevention or cure of disease, which means therapeutics.—*George F. Butler.*

QUININ IN PNEUMONIA.

FRANCIS H. POOLE, M.D.
Agency Physician, United States Indian Service.
ROSS FORK, IDAHO.

In thirteen consecutive cases of pneumonia developing in the course of a recent epidemic of that disease among the Indian school children on this reservation, the patients were treated by large doses of quinin, according to the method advocated by Galbraith,[1] without mortality. Some observations on the effects of the treatment, particularly its tendency to induce nasal and uterine hemorrhage, are given below:

Five cases developed in boys ranging in age from 7 to 13 years, and eight developed in girls between the ages of 9 and 17. The initial symptoms common to all cases were intense frontal headache, epigastric distress and vomiting, while in eight cases epistaxis also occurred during the onset.

Of the five boys, three suffered epistaxis as an initial symptom and all had repeated nasal hemorrhages during the administration of the quinin and iron treatment.

Of the eight girls, five suffered epistaxis during the onset; two of these five, aged respectively 11 and 13 years, in whom the menstrual function was not yet established, began menstruating shortly after treatment was begun, but had no further nasal hemorrhages while under treatment. Of the three others with an initial epistaxis, the hemorrhage recurred repeatedly during the treatment. The remaining three girls in whom epistaxis was not noted as an initial symptom, aged respectively 13, 14 and 17 years, began menstruating during treatment, although in none of these cases were the menses due and all were of known regularity with respect to periodicity.

Was this great tendency to hemorrhage from initial symptoms to crisis a part of the disease, peculiar to this particular epidemic, or were the nasal hemorrhages incident to the onset due to infection and the subsequent ones to the treatment?

Quinin in large doses proved a genuine stimulant to the heart and circulation and appeared, in a large measure, to allay the anxiety and apprehension and to secure sleep.

The lung involvement was as follows:

Right upper lobe	5 cases.
Entire right lung	5 cases.
Lower left lobe	2 cases.
Entire left lung	1 case.

The minimum single dose of quinin given was fifteen grains and the maximum single dose thirty-six grains.

As present-day investigators are united in the belief that the exciting etiologic factor of pneumonia is nearly always present in the circulating blood, if indeed the disease is not regarded as essentially a primary pneumococcic septicemia with a secondary process in the lungs, and acknowledging the antiseptic properties of quinin and iron, is not the line of treatment advocated by Dr. Galbraith a rational one?

IMMEDIATE CLOSURE OF TRACHEOTOMY WOUNDS.

THOMAS C. HOOVER, M.D.
Professor of Surgery, Starling Medical College.
COLUMBUS, OHIO.

The cases reported by Miles F. Porter, M.D., Fort Wayne, Ind., prompt me to report the following:

Baby girl, aged 2½ years, referred to me by Dr. Quin, West Jefferson, Ohio, Feb. 18, 1898.

The evening before the child had been playing with some corn and a grain lodged in the trachea. When she arrived at my office, having been conveyed in an open buggy eighteen miles, she was breathing easily, but she had a paroxysm of dyspnea while I was examining her.

Low tracheotomy was immediately performed and the grain of corn presenting at the tracheal opening was removed without difficulty. I closed the wound throughout with fine catgut, beginning with the trachea. The recovery was prompt and without unfavorable incident. No drain was used.

If surgical cleanliness is used there certainly can not be any good reason for using the open method in non-infectious cases of tracheotomy.

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1. THE JOURNAL, Jan. 28, 1905, p. 291.

ANOMALIES OF THE TEMPORAL BONE.

EMIL AMBERG, M.D.

DETROIT, MICH.

DISPLACEMENT OF THE MASTOID PROCESS BY THE LATERAL SINUS.[1]

One of the most common forms of asymmetry in the human skull consists in the right lateral sinus being situated more anteriorly than the left. Trautmann[2] has made extensive investigations into these conditions, and following his ideas I examined a series of 17 picked temporal bones and described them under the title, "Some Practical Remarks on the Anatomy of the Temporal Bone."[3] Basing my conclusions on the measurements of those 17 temporal bones, in which the distance of the most protruding part of the lateral sinus from the supra-meatal spine varied from 21 mm. (in a right temporal bone) to 6 mm. (also in a right temporal bone), I concluded that a lateral sinus which comes nearer to the supra-meatal spine than 10.6 mm. can be regarded as displaced forward. The distance in the specimen shown in Figures 1 and 2 is 7 mm. This specimen, however, shows a peculiarity which places it in an entirely different class. There is scarcely any mastoid process; its place is taken by the lateral sinus. The mastoid process in the specimen measures 8 mm. in length and about 1 cm. in breadth. The styloid process is situated correspondingly superficially. The meatus appears to be much narrower in the specimen than is usual, a point emphasized by Trautmann. The specimen shows an important condition not only anatomically, but also clinically.

Fig. 1.—Temporal bone, showing short mastoid process and T-like lower dissecting lines.

Fig. 2.—Same temporal bone, showing inside; lowest portion to the left.

1. Demonstrated in the Surgical Section of the Wayne County Medical Society, 1904.
2. Surgical Anatomy of the Temporal Bone, Especially with Reference to the Radical Operation, Berlin, 1898.

A CRISTA TEMPORALIS INSTEAD OF A LINEA TEMPORALIS.[4]

The linea temporalis, according to Schwartze,[5] extends directly behind the outer ear canal, horizontally, from before backward, as a direct prolongation of the upper edge of the zygomatic process, and divides the mastoid portion of the temporal bone from the squamous portion. In this specimen, instead of a shallow line there is an elevation which extends to the height of 4.5 mm., so that instead of a line there is a crest. The crest does not seem to have been produced by any pathologic changes. I do not remember ever before having seen such a crista temporalis, nor do I recollect having found its occurrence recorded in the literature.

Fig. 3.—Temporal bone, showing crista temporalis.

Dr. P. M. Hickey, Detroit Clinical Laboratory, photographed the specimens for me.

3. The Physician and Surgeon, November, 1899.
4. Demonstrated before the Wayne County Medical Society, 1904.
5. Handbook of Otology, Part 2, p. 798.

The medical profession, said the late Austin Flint, senior, will have reached a high ideal position when the physician, guided by his knowledge of diagnosis, the natural history of diseases, and existing therapeutic resources, may, with neither self-distrust nor the distrust of others, treat an acute disease by hygienic measures without potent medication.

THE PORTLAND SESSION

American Medical Association, Fifty-Sixth Annual Session, Portland, Oregon, July 11 to 14, 1905.

OFFICIAL CALL

THE FIFTY-SIXTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, TO BE HELD IN PORTLAND, OREGON, JULY 11-14, 1905.

The next annual session of the American Medical Association will be held at Portland, Ore., on Tuesday, Wednesday, Thursday and Friday, July 11, 12, 13 and 14, 1905. The first general meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10 a. m., Tuesday, July 11.

The following is a list of the constituent associations and the number of delegates to which each is entitled:

State.	Delegates.	State.	Delegates.
Alabama	3	Montana	1
Arizona	1	Nebraska	2
Arkansas	2	Nevada	1
California	4	New Hampshire	1
Colorado	2	New Jersey	3
Connecticut	2	New Mexico	1
Delaware	1	New York	4
Dist of Columbia	1	North Carolina	2
Florida	1	North Dakota	1
Georgia	2	Ohio	5
Hawaii	1	Oklahoma	1
Idaho	1	Oregon	1
Illinois	8	Philippine Islands	1
Indian Territory	1	Pennsylvania	8
Indiana	4	Rhode Island	1
Iowa	4	South Carolina	1
Kansas	2	South Dakota	1
Kentucky	3	Tennessee	3
Louisiana	2	Texas	5
Maine	1	Utah	1
Maryland	2	Vermont	1
Massachusetts	6	Virginia	3
Michigan	4	Washington	1
Minnesota	2	West Virginia	2
Mississippi	2	Wisconsin	3
Missouri	3	Wyoming	1

U. S. Public Health and Marine-Hospital Service.... 1
Medical Department, U. S. Army..... 1
Medical Department, U. S. Navy..... 1
Each of the scientific sections, one delegate..... 12

Fig. 1.—Mt. Hood. Another view is given in Fig. 12.

The Registration Department will be open from 8 a. m. to 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, July 10, 11, 12 and 13, and from 9 to 11 a. m. on Friday, July 14.

NEW MEMBERS.

Those who desire to join the Association at Portland must present certificates showing that they are members in good standing in their state association or in one of its component branches.

THE HOUSE OF DELEGATES.

The House of Delegates of the American Medical Association will convene at the Chamber of Commerce Building, Portland, Ore., at 10 a. m., Monday, July 10, 1905.

GEORGE H. SIMMONS, Secretary. JOHN H. MUSSER, President.

THE OFFICIAL PROGRAM.

In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter. A copy will be presented to each member on registration.

COMMITTEE OF ARRANGEMENTS.

List of the General Staff of Officials Who Look After the Arrangements.

The following is the list of the members of the general Committee of Arrangements. The full list of subcommittees will appear in the official program:

K. A. J. Mackenzie, chairman; H. W. Coe, A. J. Giesy, A. C. Smith, E. F. Tucker, William Jones; George F. Wilson, treasurer; F. Cauthorn, secretary.

ASSOCIATION COMMITTEES.

List of the Members of the Committees of the American Medical Association.

Committee on Award of Senn Medal.—J. E. Moore, Minneapolis, chairman; M. L. Harris, Chicago; Floyd W. McRae, Atlanta, Ga.

Committee on Scientific Exhibit.—F. B. Wynn, Indianapolis, director; W. M. L. Coplin, Philadelphia; Walter L. Bierring, Iowa City, Iowa; Horace J. Whitacre, Cincinnati; William T. Eckley, Chicago; W. Ophuls, San Francisco; O. P. Jenkins, Stanford University, Cal.

Committee on Rush Monument.—James C. Wilson, Philadelphia, chairman; Henry D. Holton, Brattlebro, Vt., treasurer; Frank Billings, Chicago; L. Duncan Bulkley, New York; William L. Rodman, Philadelphia.

Committee on Medical Legislation.—Charles A. L. Reed, Cincinnati, Ohio, chairman, one year; William L. Rodman, Philadelphia, two years, and William H. Welch, Baltimore, three years.

Committee on Transportation and Place of Session.—M. L. Harris, Chicago, chairman; John C. Munro, Boston; G. C. Savage, Nashville, Tenn.; W. A. Jayne, Denver; H. Bert Ellis, Los Angeles.

Committee on National Incorporation.—Joseph D. Bryant, chairman, New York; H. L. E. Johnson, Washington, D. C.; Leartus Connor, Detroit; D. S. Fairchild, Des Moines, Iowa, and C. G. Kenyon, San Francisco.

Judicial Council.—P. Maxwell Foshay, Illinois; D. C. Peyton, Indiana; F. H. Wiggin, New York; George Ben Johnston, Virginia; W. B. Russ, Texas.

Committee on Scientific Research.—Alfred Stengel, Philadelphia, chairman; William Osler, Baltimore, and L. Hektoen, Chicago.

Committee on Organization.—J. N. McCormack, Bowling Green, Ky., chairman; P. Maxwell Foshay, Chicago; George H. Simmons, Chicago.

Council on Medical Education.—Arthur Dean Bevan, Illinois, chairman; W. T. Councilman, Massachusetts; J. A. Witherspoon, Tennessee; Charles H. Frazier, Pennsylvania; Victor C. Vaughan, Michigan.

Fig. 2.*—Crater Lake, in southern Oregon.

* EDITOR'S NOTE: A number of the photographs from which these views of Portland and Oregon scenery were made are copyrighted by Kiser Brothers, Portland, Oregon. We acknowledge their courtesy in allowing THE JOURNAL to reproduce them.

PRELIMINARY PROGRAMS OF SECTIONS.

The following is a partial list of titles of papers to be read before the various sections at Portland. The order in which the titles are printed here will not necessarily be followed in the official program.

SECTION ON PRACTICE OF MEDICINE.

CHAIRMAN, RICHARD C. CABOT, BOSTON; SECRETARY, JOSEPH L. MILLER, 100 STATE ST., CHICAGO.

SYMPOSIUM ON NEPHRITIS.

The Relation of Albuminuria to Nephritis. Alfred Stengel, Philadelphia.

The Relation of Cylindruria to Nephritis. C. P. Emerson, Baltimore.

The Cryoscopy of the Urine in Nephritis. Theodore Tieken, Chicago.

The Varieties of Nephritis (Clinical and Pathologic Division). W. T. Councilman, Boston.

Renal Insufficiency. Charles L. Green, St. Paul.

The Relation of Nephritis to Puerperal Eclampsia and of the Latter to Acute Liver Atrophy. P. K. Brown, San Francisco.

The Dietetic Treatment, with Special Reference to von Noorden. F. C. Shattuck, Boston.

Uncinariasis. B. K. Ashford and W. W. King, Porto Rico.

Symptoms, Diagnosis and Prognosis of Amebiasis in the Tropics. W. E. Musgrave, Manila, P. I.

SYMPOSIUM ON GASTRIC CONDITIONS.

Recent Advances in the Physiology of Human Nutrition. Frank Billings, Chicago.

Limitation and Uses of a Knowledge of Gastric Chemistry (with Demonstrations). George Dock, Ann Arbor, Mich.

Non-Gastric Diseases Presenting Themselves with Gastric Symptoms. J. H. Musser, Philadelphia.

Studies in Roentgen Ray Diagnosis of Chest Diseases. James E. Talley and William S. Newcomet, Philadelphia.

Beriberi on the Pacific Coast. K. A. J. MacKenzie, Portland, Ore.

Thyroid Disease in California. H. C. Moffitt, San Francisco.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

CHAIRMAN, C. L. BONIFIELD, CINCINNATI; SECRETARY, W. P. MANTON, DETROIT.

Chairman's Address. C. L. Bonifield, Cincinnati.

The Anatomy of the Pelvic Floor, with Relation to Its Lacerations and Repair. S. Stark, Cincinnati.

A Review of Pelvic Measurements Made in My Hospital, Dispensary and Private Practice During the Past Five Years. Effa V. Davis, Chicago.

Repair of the Perineum (Illustrated by Lantern Slides). G. B. Somers, San Francisco.

Pregnancy Following Operations for the Cure of Retrodisplacements of the Uterus. Franklin H. Martin, Chicago.

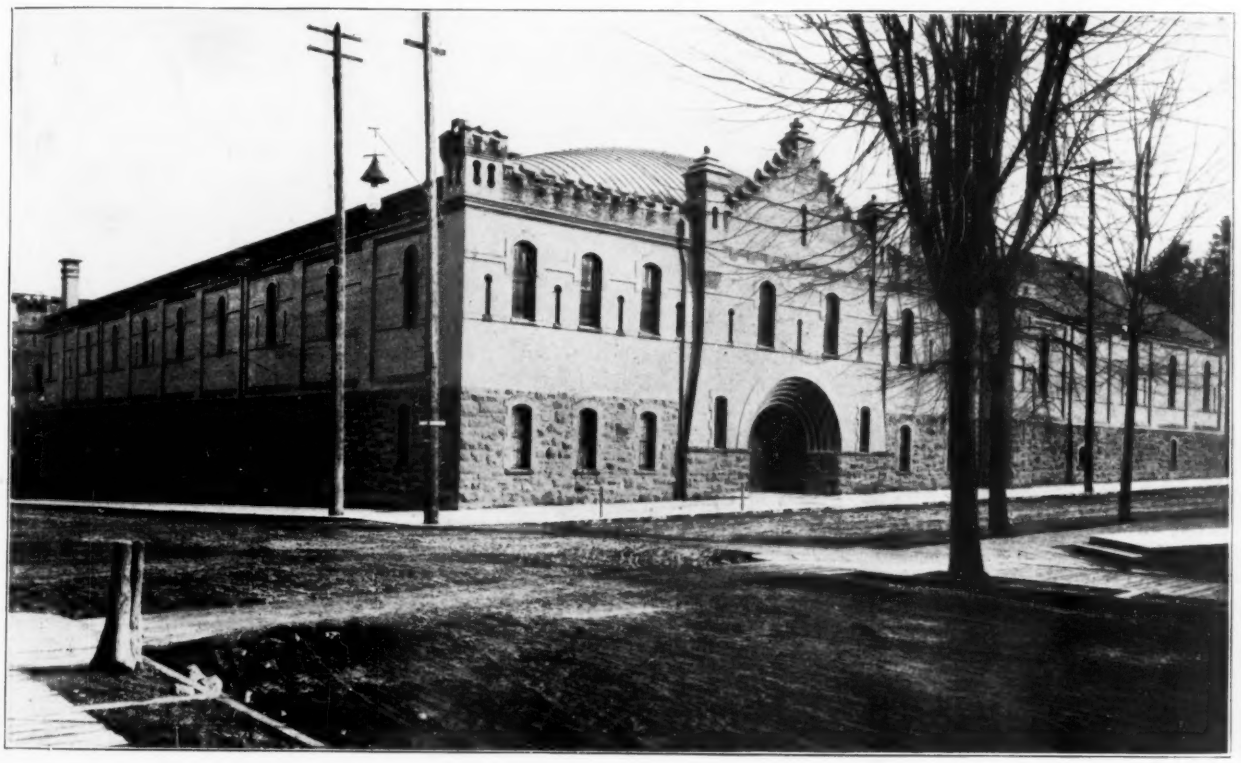

Fig. 3.—Oregon National Guard Armory. Meeting place of General Meetings. Section on Surgery and Anatomy and Section on Practice of Medicine. Location of branch postoffice, registration department, pharmaceutical and appliance exhibit, information bureau, etc. Across the street is the location of the Scientific Exhibit and the meeting places of all the other sections except two, the Section on Ophthalmology and the Section on Laryngology and Otology. These two sections will meet four blocks away.

The Diagnosis and Treatment of Gastric Stasis from Any Cause. C. G. Stockton, Buffalo.

Coccidoidal Granuloma. William Ophüls, San Francisco.

The Effects of the Inhalation of the Fumes of Nitric Acid, with Report of Cases. J. N. Hall, Denver.

Mountain Fever. Henry Sewall, Denver.

The Significance of Blood Pressure in Comparative Health. H. W. Cook, Baltimore.

The Incidence of Heart Disease in San Francisco. W. F. Cheney.

Value of Various Hemoglobin Instruments to the General Practitioner. M. H. Fussell, Philadelphia.

A Type of Tuberculosis on the North Pacific Coast. Woods Hutchinson, Portland, Ore.

A Comparative Study of Tuberculosis in Negroes and Whites. John T. Moore, Galveston.

Clinical Aspects of Amebic Abscess of Liver. W. S. Thayer, Baltimore.

Tubal Pregnancy, with Report of Instructive Case. J. Riddle Goffe, New York.

Some Indications for Surgical Operations During Pregnancy. A. E. Benjamin, Minneapolis.

Overlapping the Fasciæ in the Closure of Wounds of the Abdominal Wall. Charles P. Noble, Philadelphia.

The Innocent Fibromyoma of the Uterus. Thomas Barker Eastman, Indianapolis.

Etiology and Treatment of So-Called Endometritis. Ernest F. Tucker, Portland, Ore.

The Conservation or Restoration of Normal Anatomy in Gynecologic Surgery. Daniel H. Craig, Boston.

Present-Day Methods of Conducting Labor Cases and Results Obtained. John A. McKenna, Lansdowne, Pa.

The Physiologic and Legal Status of the Fetus in Utero. W. H. Sanders, Montgomery, Ala.

The Maternal Impression Superstition in Modern Obstetric Teaching. Edwin Taylor Shelly, Atchison, Kan.

Maternal Syphilis. George S. Whiteside, Portland, Ore.

Some Cases of Extra-Uterine Pregnancy. J. H. Carstens, Detroit.

The Best Methods of Closure of Aseptic Wounds, Especially of the Abdomen. Henry O. Marcy, Boston.

Hysteromyomectomy versus Hysterectomy for Fibroids; A Plea for Conservatism When Operating on Women Under Forty. C. C. Frederick, Buffalo.

Some Causes of Failure After Successful Gynecologic Operations. William E. Ground, Superior, Wis.

Pulmonary Tuberculosis as an Obstetric Complication. C. S. Bacon, Chicago.

Postoperative Pelvic Exudates. W. Francis B. Wakefield, San Francisco.

An Operation for Pyosalpinx without Ligature, Clamp, Artery Forceps or Bleeding by Overthrow Provisional Suture Method. Report of 59 Cases with One Death. W. D. Kelly, St. Paul.

Some Complications of Pregnancy Treated Surgically. Francis D. Donoghue, Boston.

Gonorrhea in the Female; A Discussion of Its Diagnosis and Frequency. L. H. Dunning, Indianapolis.

The Results of Amputation of the Cervix Uteri in Chronic Metritis. C. Jeff Miller, New Orleans.

Hernia of the Fallopian Tube. Frank T. Andrews, Chicago.

Syncytioma Malignum. Laura H. Branson, Iowa City, Iowa.

Fourth Detailed Report of the Superior and Lasting Results of My Bi-inguinal Operation for Simple and Complicated Aseptic Retroversion of the Uterus. A. Goldspohn, Chicago.

SECTION ON SURGERY AND ANATOMY.

CHAIRMAN, MAURICE H. RICHARDSON, BOSTON; SECRETARY, FLOYD W. MCRAE, ATLANTA, GA.

Chairman's Address: Maurice H. Richardson, Boston.

The Cure of Inguinal Hernia. Henry O. Marcy, Boston.

Colohepatopexy or Colon Substitution; a Remedy for Perigastric Adhesions After Gallstone Operations. E. Wyllys Andrews, Chicago.

Splanchnoptosis from a Surgical Standpoint. James E. Moore, Minneapolis.

Early Diagnosis of Gastric Ulcer. H. D. Niles, Salt Lake City.

Clinical Experiences with the Use of the McGraw Elastic Ligature. A. J. Ochsner.

Ulcer of the Stomach and First Portion of the Duodenum, with Especial Reference to the Operative Treatment. W. J. Mayo, Rochester, Minn.

Fig. 4.—Portland Hotel. Headquarters.

Gallstones in the Common Duct. W. D. Haggard, Nashville, Tenn.

Cysts of the Spleen. W. A. Bryan, Nashville, Tenn.

Indications for the Removal of the Pathologic Spleen. B. B. Davis, Omaha.

Exstrophy of the Bladder Treated Successfully by Peter's Method, with Illustrations. Harry M. Sherman, San Francisco.

The Bloodless Resection of the Rectum. Ernest Laplace, Philadelphia.

End Results of 100 Operations for Cancer of the Breast. Homer Gage, Worcester, Mass.

Lip Operation for Cancer and Deformity, with Report of Cases. W. W. Grant, Denver.

Esophagectomy, with Report of Case with Prothetic Appliances. Wallace I. Terry, San Francisco.

Tuberculosis of the Kidney. J. Garland Sherrill, Louisville.
The Value of Skiagraphy in Lithiasis and Tuberculosis of the Kidney. Carl Beck, New York.
Anaërobic Cellulitus, with Report of Successful Cases. J. Clark Stewart, Minneapolis.
Ununited Fracture and Cases of Delayed Union. Casper W. Sharples, Portland, Ore.
A Clinical Chart for the Record of Patients in a Small Hospital. George F. Wilson, Portland, Ore.
Surgery and Pathology of Thyroid Gland. Joseph C. Bloodgood, Baltimore.
Surgery of the Spinal Cord. J. B. Murphy, Chicago.
Fibroid Growths of the Abdominal Wall. Charles A. Powers, Denver.
Penetrating Wounds of the Abdomen. R. Winslow, Baltimore.
Meckel's Diverticulum as a Cause of Abdominal Crises. Miles F. Porter, Ft. Wayne, Ind.

Papers, the titles of which have not been received, will be read by Kenneth A. J. MacKenzie, Portland, Ore.; Park Weed Willis, Seattle, Wash.; A. H. Cordier, Kansas City, Mo., and Harvey Cushing, Baltimore.

SECTION ON HYGIENE AND SANITARY SCIENCE.

CHAIRMAN, JOHN S. FULTON, BALTIMORE; SECRETARY, M. L. PRICE, BALTIMORE.

The preliminary program of this section has not been received.

SECTION ON OPHTHALMOLOGY.

CHAIRMAN, CHRISTIAN R. HOLMES, CINCINNATI; SECRETARY, ALBERT E. BULSON, JR., FORT WAYNE, IND.

Chairman's Address: Studies of School and Hospital Hygiene of Interest to the Ophthalmic Surgeon (Illustrated with Lantern Slides). Christian R. Holmes, Cincinnati.

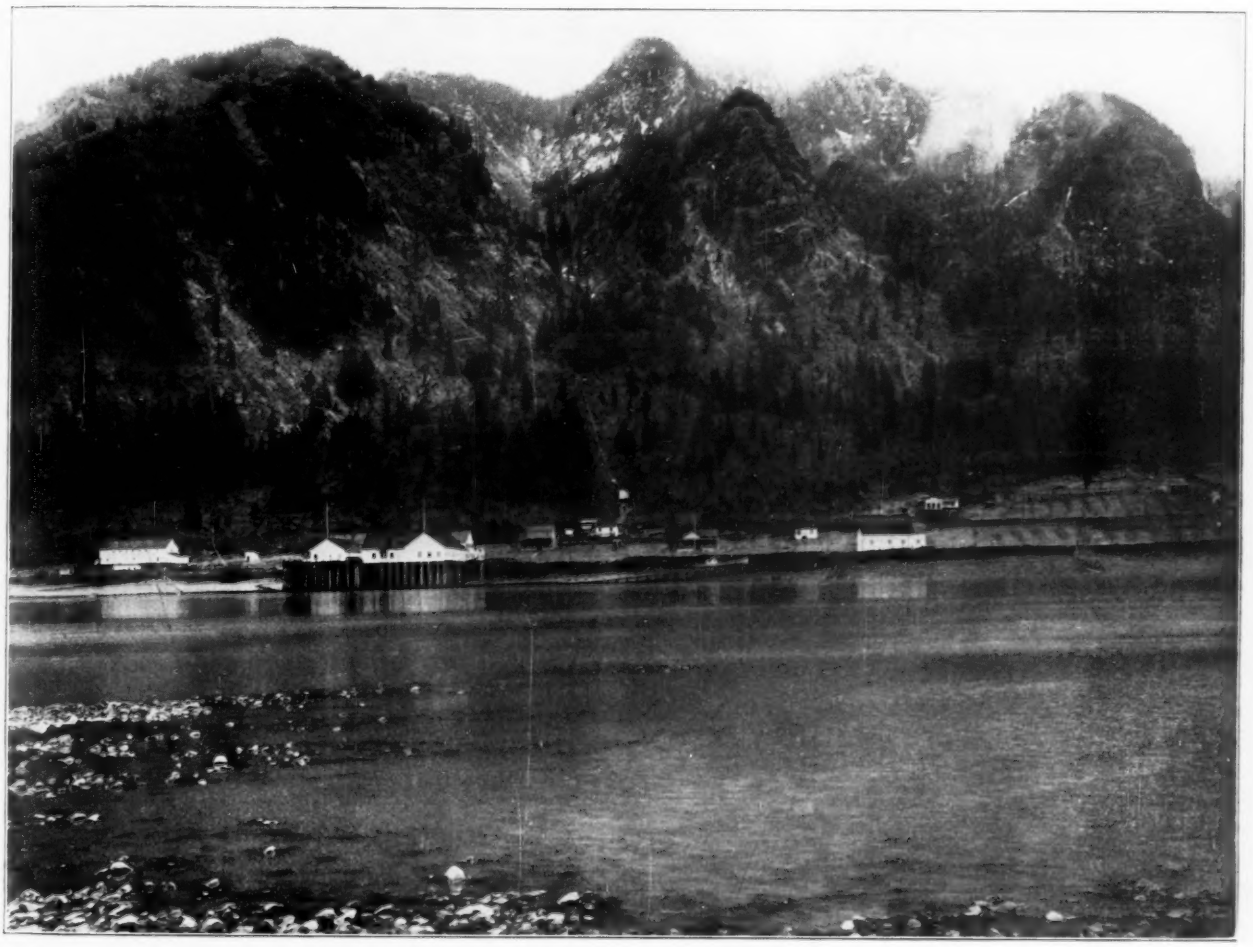

Fig. 5.—Columbia River excursion scenery. Cascade range.

Perforations in Typhoid Fever. Richard H. Harte, Philadelphia.
Further Experiences with the Radical Operation for the Cure of Aneurism by Aneurismorrhaphy. Rudolph Matas, New Orleans.
Observations on Postoperative Stimulation Based on 6,000 Major Operations. G. W. Crile, Cleveland.
Tuberculosis of the Kidney. Leonard Freeman, Denver.
Non-Calculus Cholecystitis. Davis S. Fairchild, Des Moines, Iowa.
Cancer. William L. Rodman, Philadelphia.
Acid Intoxication and Late Poisonous Effects from Ether and Chloroform. Arthur D. Bevan, Chicago.
Preliminary Report of a Study of Tetanus. James M. Anders, Philadelphia.
Address (by special invitation). J. Hirschberg, Berlin.
The Ocular Symptoms of Affections of the Accessory Sinuses of the Nose. William Campbell Posey, Philadelphia.
Demonstration of a Simple Method of Accurately Localizing by the X-Ray a Foreign Body in the Eye. Vard H. Hulen, San Francisco.
The Treatment of Recent Embolism of the Retinal Arteries by Digital Massage. H. V. Würdemann, Milwaukee, Wis.
Is Keratitis Ever Caused by Rheumatism? Leartus Connor, Detroit.
The Correction of Exophoria by the Development of the Interni. W. H. Roberts, Pasadena, Cal.

Description of an Advancement Suture with Collective Suggestions Regarding Operations on the Ocular Muscles. Mark D. Stevenson, Akron, Ohio.

Lateral Displacement of Tendon Insertions for the Cure of Strabismus. Edward Jackson, Denver.

The Prevention and Cure of Progressive Axial Myopia by Appropriate Treatment of the Internal and External Recti Muscles, with Report of Cases. F. S. Crocker, Chicago.

Transitory Paralysis of the Abducens, with Report of Cases. Meyer Wiener, St. Louis.

The Extraction of Uncomplicated Immature Senile Cataract. Albert E. Bulson, Jr., Fort Wayne, Ind.

Blasting Eye Injuries. John A. Donovan, Butte, Mont.

Some Eye Injuries and Their Lessons. F. C. Heath, Indianapolis.

Non-Toxic Amblyopia. T. W. Moore, Huntington, W. Va.

Amblyopia Caused by Wood Alcohol. C. S. G. Nagel, San Francisco.

A Contribution to the Methods of Restoring the Socket for Prothesis. William H. Wilder, Chicago.

Subconjunctival Salt Injections. Samuel D. Risley, Philadelphia.

Rat-tail Tendons for Sutures in Eye Surgery. Kaspar Pischel, San Francisco.

The Physiologic Action of Dionin. Walter Hamilton Snyder, Toledo, Ohio.

New Test Types Made According to Geometric Progression. Charles H. Williams, Boston.

Traumatic Lesions of the Eye. Frank W. Miller, Los Angeles, Cal.

SECTION ON DISEASES OF CHILDREN.

CHAIRMAN, JOHN LOVETT MORSE, BOSTON; SECRETARY, J. ROSS SNYDER, BIRMINGHAM, ALA.

Chairman's Address: The Teaching of Pediatrics. J. L. Morse, Boston.

A Plea for Better Education of the Laity in the Prevention of Disease, with Especial Reference to Childhood and Adolescence. R. H. Harvey, Chicago.

A Plea for National and Local Boards of School Hygiene. A. M. Smith, Tacoma, Wash.

Rules for the Care of Young Infants in Public Institutions. H. M. McClanahan, Omaha.

Fig. 6.—Treadwell Mine, and the largest stamp mill in the world, operating one thousand stamps. This is on Douglass Island, on the Alaska trip.

Experimental and Clinical Evidence of Dynamic (Spastic) Astigmatism. Practical Conclusions. F. B. Eaton, San Francisco.

Sympathetic Inflammation Following Panophthalmitis. William Zentmayer, Philadelphia.

Spontaneous Hemorrhage in the Orbit. J. W. Reynolds, Creston, Iowa.

Contributions to the Ocular Pathology of (a) Primary Epithelioma of the Cornea; (b) Panophthalmitis from Bacillus Subtilis. Report of Two Cases. George T. Brady, San Francisco.

Differential Diagnosis of Intraorbital Tumors. Report of Unique Case. Flavel B. Tiffany, Kansas City, Mo.

Endothelio-Cylindroma of the Orbit, with Report of a Case. Removal with Preservation of the Vision and Motility of the Eye. John E. Weeks, New York.

A Case of Iritis Tuberculosa Cured by Koch's Tuberculin. E. V. L. Brown, Chicago.

Amaurotic Family Idiocy. A. C. Cotton, Chicago.

Ataxia of Central Origin Appearing in Childhood. A. W. Fairbanks, Boston.

The Prevention of Summer Diarrhea. M. Ostheimer, Philadelphia.

Typhoid in Children; A Clinical Study of 210 Cases. W. J Butler, Chicago.

The Management of Typhoid Fever in Children. W. C. Hollopeter, Philadelphia.

Pneumonia in Children. E. F. Wells, Chicago.

Pleural Effusions in Children. C. F. Wahrer, Ft. Madison, Iowa.

Vaccination in Whooping Cough and the Use of Adrenal Preparations. E. W. Saunders, St. Louis.

The After-Effects of Diphtheria on the Heart. A Preliminary Report. F. W. White, Boston, Mass.

Malignant Diseases of Ovary in Childhood. W. A. Edwards, Los Angeles, Cal.

Report of Case of Imperforate Rectum, with Absence of Anus. E. H. Small, Pittsburg, Pa.

Surgical Intervention for the Intracranial Hemorrhages of the New Born. Harvey Cushing, Baltimore.

Surgical Treatment of Congenital Pyloric Stenosis. J. C. Munro, Boston.

Can Retention of the Tube in Operative Treatment of Diphtheritic Laryngeal Stenosis Be Avoided? F. G. Burrows, San Francisco.

A Study of Eighteen Cases of Diarrhea in Children. J. C. Cook, Chicago.

Hemorrhages Into the Spinal Meninges of New Born. I. A. Abt, Chicago.

Ringworm and Some of Its Allied Affections. A Practical Demonstration from Lantern Slides. M. L. Heidingsfeld, Cincinnati.

A paper, title not received, by J. H. M. Knox, Baltimore.

SECTION ON STOMATOLOGY.

CHAIRMAN, VIDA A. LATHAM, ROGERS PARK, CHICAGO; SECRETARY, EUGENE S. TALBOT, 103 STATE ST., CHICAGO.

Chaiman's Address. Vida A. Latham, Chicago.

Fatal Oral Pathologic Conditions. G. V. I. Brown, Milwaukee, Wis.

Surgical Bacteriology of the Mouth. A. H. Levings, Milwaukee, Wis.

Surgical Aspects of Disturbed Dentition of the Third Molar. M. L. Rhein, New York City.

The Treatment of Suppurative Affections of the Face and Neck Emanating from Mouth. M. I. Schamberg, Philadelphia.

The Medical Relations of Certain Conditions of the Mouth. L. Duncan Bulkley, New York City.

Some Effects of Inebriety on the Teeth and Jaws. T. D. Crothers, Hartford, Conn.

The Ossification of the Lower Jaw. Edward Fawcett, Bristol, England.

Ankylostomiasis and Tongue Pigment. T. M. Russell Leonard, Grenada, British West Indies.

Notes on Tooth Genesis in Man. H. W. Marett Tims, London, England.

The Etiology of Tooth Corrugations. G. Lenox Curtis, New York City.

To What Extent Are Teeth Necessary to the Human Being? M. H. Fletcher, Cincinnati.

The Roentgen Rays in Dentistry. M. Kassabian, Philadelphia.

Fig 7.—Juneau, Alaska, on the excursion trip to Alaska.

The Causes and the Treatment of the Mouth Manifestations of Certain Metabolic Disorders. Alfred C. Croftan, Chicago.

The Oral Manifestations of Diabetes Mellitus. Hermann Prinz, St. Louis.

The Urine and Saliva in So-Called Pyorrhea Alveolaris. William J. Lederer, New York City.

Further Researches in the Treatment of Interstitial Gingivitis. Eugene S. Talbot, Chicago.

Excretion of Toxic Products into the Mouth, with Relation to Local Infection. Fenton B. Turck, Chicago.

A Common Ground for Medicine and Dentistry. Frank L. Platt, San Francisco.

The Physician as a Dentist. Calvin W. Knowles, San Francisco.

The Physician's Duty to the Child from a Dental Standpoint. Alice M. Steeves, Boston.

Dentistry of To-morrow. H. P. Carlton, San Francisco.

What Will Probably Be the Dental Educational Standard for the Coming Decade? C. C. Chittenden, Madison, Wis.

SECTION ON NERVOUS AND MENTAL DISEASES.

CHAIRMAN, J. H. MCBRIDE, PASADENA, CAL.; SECRETARY, DAVID I. WOLFSTEIN, 22 W. SEVENTH ST., CINCINNATI.

Chairman's Address. J. H. McBride, Pasadena, Cal.

Report of Committee on Drug Addictions. Smith Ely Jelliffe (Chairman), New York.

Defects of Will from a Medical Standpoint. H. T. Pershing, Denver.

Neurasthenoid Conditions, So-Called Neurasthenia. Robert Hessler, Logansport, Ind.

Trauma and Shock as Factors in the Production of Mental and Nervous Diseases. Samuel Bell, Detroit.

The Individual Care of Borderline Cases of Mental Diseases (Minor Psychoses). Frank P. Norbury, Jacksonville, Ill.

Restraint of Liberty in the Treatment of Neurasthenic States. William S. Lindsay, Topeka, Kan.

The Localization of the Higher Psychic Functions, Especially with Reference to the Prefrontal Lobe. Charles K. Mills and T. H. Weisenburg, Philadelphia.

Symptomatology of Cerebrospinal Arteriosclerosis, with Special Reference to Neurasthenic States. D. J. McCarthy, Philadelphia.

Landry's Paralysis, with Report of Cases. Robert McGregor, Saginaw, Mich.

A Case of Landry's Paralysis. Wharton Sinkler, Philadelphia.

Periodic Paralysis. G. E. Holtzapple, York, Pa.

The Tabetic Foot; Its Importance in the Causation of the Ataxia of the Lower Extremities. Sidney I. Schwab, St. Louis.

A Preliminary Report on Experimental Encephalitis. John H. W. Rhein, Philadelphia.

Nervous and Mental Manifestations of Pre-Pernicious Anemia. F. W. Langdon, Cincinnati.

The Abnormal Child. D. I. Wolfstein, Cincinnati.

Clinical Reports of Some Unique Cases of Hysteria. C. C. Hersman, Pittsburg, Pa.

Public Care of the Insane. J. M. Barstow, Council Bluffs, Iowa.

The Use of Fresh Egg Membrane in Brain Surgery. Albert E. Sterne, Indianapolis.

SECTION ON LARYNGOLOGY AND OTOLOGY.

CHAIRMAN, ROBERT C. MYLES, NEW YORK; SECRETARY, OTTO T. FREER, CHICAGO.

Chairman's Address. Robert C. Myles, New York.

Laryngeal Edema. Harmon Smith, New York.

Angina Herpetica in Children. Henry L. Wagner, San Francisco.

The Treatment of Empyema of the Antrum Through the Nose. George L. Richards, Fall River, Mass.

Tonsillotomy versus Tonsillectomy. Joseph C. Beck, Chicago.

Tracheo-Thyrotomy for Malignant Diseases of the Larynx. Chevalier Jackson, Pittsburg.

Collodion as a Dressing After Intranasal Operations. A Preventive of Postoperative Hemorrhage (with Demonstrations). Kaspar Pischel, San Francisco.

The Vapor Method of Anesthesia. James T. Gwathmey, New York.

A Review of Fifty Operations for Deviated Septum by the Freer Method. P. J. H. Farrell, Chicago.

Fig. 8.—Willamette Falls, near Portland, on the Willamette River.

The Psychopathic Manifestations of the Non-Insane Psychoneuroses. John Punton, Kansas City, Mo.

Pre-natal Influences as a Causative Factor in the Production of Nervous and Other Diseases. W. H. Walling, Atlantic City, N. J.

The Psychosis of Morphinism. T. D. Crothers, Hartford, Conn.

The Relation Between Auditory Hallucination and Tinnitus Aurium. W. Sohier Bryant, New York City.

Comparison of the Quick and the Slow Methods of the Treatment of Morphinism. A. J. Pressey, Cleveland.

SECTION ON CUTANEOUS MEDICINE AND SURGERY.

CHAIRMAN, D. W. MONTGOMERY, SAN FRANCISCO; SECRETARY, R. R. CAMPBELL, CHICAGO.

The preliminary program of this section has not been received.

A Demonstration of the Window Resection Method for the Correction of Deflections of the Nasal Septum. O. T. Freer, Chicago.

The Correction of External Deformities of the Nose Associated with Deviation of the Septum. Charles M. Robertson, Chicago.

The Correction of Saddle-Nose by Bone Implantation. Cullen F. Welty, San Francisco.

The Deformed Nasal Septum in the Causation of Respiratory Diseases. Amos R. Solenberger, Colorado Springs.

Chronic Suppurative Ethmoiditis. Its Frequency and Bearing on So-Called Chronic Nasopharyngeal Catarrh. Redmond Payne, San Francisco.

Diagnosis of the Intracranial Complications Due to Middle Ear Suppurations. John F. Barnhill, Indianapolis.

Capital Operations for the Cure of Tinnitus Aurium. W. S. Bryant, New York.

Four Cases of Mastoid Operations Without Opening the An-

trum; Recovery; a Fifth, Periostitis only, and a Sixth, Destruction of Inner Table of Skull. George F. Cott, Buffalo.

A Report of Two Cases of Sinus Thrombosis. Hill Hastings, Los Angeles.

The Use of the Burr in Mastoid Operations. Adolph Barkan, San Francisco.

Exhibition of a New Tonsillotome. Edwin E. Straw, Marshfield, Ore.

SECTION ON PHARMACOLOGY.

CHAIRMAN, HEINRICH STERN, NEW YORK; SECRETARY, C. S. N. HALLBERG, 358 DEARBORN ST., CHICAGO.

Chairman's Address: Heinrich Stern, New York.

Report of Committee on Proprietary Medicines. C. S. N. Hallberg, W. J. Robinson, H. C. Wood, Jr.

Report of Committee to Aid Postoffice Department in Excluding Objectionable Advertisements. C. S. N. Hallberg, H. W. Wiley, H. C. Wood, Jr.

The Pharmacopeia of the United States of America; Its Functions. How May These Be Best Presented to the Medical Profession? William M. Searby, San Francisco.

The United States Pharmacopeia; Its Eighth Decennial Revision. The Organic Materia Medica. Albert Schneider, San Francisco.

The United States Pharmacopeia VIII. The Advance Indicated in Its Pharmacy. C. S. N. Hallberg, Chicago.

The Physician and Proprietary Medicines. George H. Simmons, Chicago.

Fig. 9.—Portland City Hall.

A Practical Cure for the Substitution Evil. Edward A. Tracy, South Boston, Mass.

The Therapeutics of Lupulin. Thomas F. Reilly, New York.

SECTION ON PATHOLOGY AND PHYSIOLOGY.

CHAIRMAN, WINFIELD S. HALL, CHICAGO; SECRETARY, HENRY A. CHRISTIAN, BOSTON.

Chairman's Address: Pathologic Physiology—A Neglected Field. Winfield S. Hall, Chicago.

Case of Cholesterin Stones in Brain. E. E. Southard, Boston.

The Pathology of Varicella. E. E. Tyzzer, Boston.

Methemoglobin as a Factor of Conservative Metabolism. Bernard Oettinger, Denver.

The Pathology of Intestinal Amebiasis (Amebic Dysentery). Paul G. Wooley, Manila, P. I.

The Influence of Chronic Passive Congestion and Cirrhosis of the Liver on the Connective Tissue of the Spleen. Henry A. Christian, Boston.

Further Studies on Streptococcus Infection. G. F. Ruediger, Chicago.

Some Observations on Auscultation of the Abdomen. W. B. Cannon, Boston.

The Freezing Points of Blood and of Urine in Pneumonia; with a Description of a New Method. F. E. Schmidt, Chicago.

Variations in the Ratio of Diameters of the Normal Chest at Different Ages. The Form of the Phthisical Chest. W. A. Bessesen, Chicago.

Are the Proteolytic and Milk Curdling Effects of the Gastric Juice Due to One and the Same Enzyme? J. C. Hemmeter, Baltimore.

Errors in the Determination of Free HCl in the Gastric Juice. E. L. Whitney, Baltimore.

The Blood Plates; Their Microchemistry, Physiology, and Pathology. G. T. Kemp, Champaign, Ill.

A Critical Study of the Various Methods for Determining the Number of Plates in the Blood. J. H. Pratt, Boston.

Fig. 10.—Seining on the Columbia River.

Ulcero-Membranous Angina (Vincent's Angina) and Stomatitis. George H. Weaver, Chicago.

Some Preliminary Steps in the Investigation of Gastric Functions. B. Onuf (Onufrowicz), Sonyea, N. Y.

Mode of Infection in Uncinariasis. Claude A. Smith, Atlanta.

A Further Report on Bacterial Cell Chemistry and Immunity. Victor C. Vaughan, Ann Arbor, Mich.

A New Bothriocephalid Tapeworm in Man. Henry B. Ward, Lincoln, Neb.

Temperature and Muscle Fatigue. F. S. Lee, New York.

Fig. 11.—Inside view of cannery, twenty tons of salmon being on receiving floor.

A Physico-chemical Theory of Fertilization. Martin H. Fischer, San Francisco.

Mineral Albumin Requirements in Health and Disease. L. Breisacher, Detroit.

The Secretion of Pepsin and Rennin: An Experimental Study. Gottfried Koehler, Chicago.

Mucocele of the Appendix. Alfred Stengel, Philadelphia.

Two Cases of Myoma of Esophagus. J. Bryant, Boston.

A paper, title not received, by F. R. Zeit, Chicago.

PORTLAND AND OREGON

FEW are the men who have such an intellectual grasp on the sequence of events as to be able to look forward 100 years and to predicate the resultant effects of all the intermediate transitory conditions. To be able to do this was supposed to be the special prerogative of the divinely inspired seer and prophet. And yet Thomas Jefferson, as the result of his political genius and knowledge of human history, looking forward over the years to come, saw clearly that the United States was to become a great nation, whose western boundary must be the shores of the Pacific Ocean.

At that time our great Northwest was a land as mythical as the location of the scenes of a Rider Haggard novel. Gray, with his ship *Columbia*, had, in 1792, entered the mouth of a great river, which emptied into the Pacific, and which has since been called by the name of his vessel. From the other side had come vague accounts, gathered of the Indians by Jonathan Carver, of a river which, taking its source in the "Stony Mountains," ran westward, and which he called the "Oregon," a name as mythical in its origin as the country through which it flowed; and, for years afterward, this name, as it occurred in the sonorous roll of Bryant's "Where rolls the Oregon," was but a terse expression for distance and vagueness.

To the prophetic mind of Thomas Jefferson this distance and vagueness were but temporary conditions. This country would in time be necessary for the inevitable expansion of the then young and growing nation. The result was the Lewis and Clark expedition, and what an expedition it was! Who that has ever read this simple, straightforward tale of hardship and struggle in an unknown country, amid all the dangers of hostile Indians and snow-clad mountains, can ever forget it? The splendid confidence and co-operation of the two young leaders, their warm, personal friendship, the care and foresight displayed by them in all their plans, the unswerving fidelity of every member of the party, and finally its completely successful execution, mark this as the very type of what such an expedition should be, and cause the heart of every American to thrill with pride.

In passing, it is well to call attention to the influence of Clark's medicine chest on the success of this enterprise. Clark seems to have possessed some crude ideas of surgery, and to have had considerable knowledge of the use of the more common drugs. He was constantly being called on to treat the sick among the various tribes, especially fevers, ulcers and sore eyes, and gained a reputation that he himself says became a source of worry to him. But his efforts secured the good will of the Indians and made friends when friends were needed. Who can estimate the influence of this belated acknowledgment of the services of Clark's medicine chest?

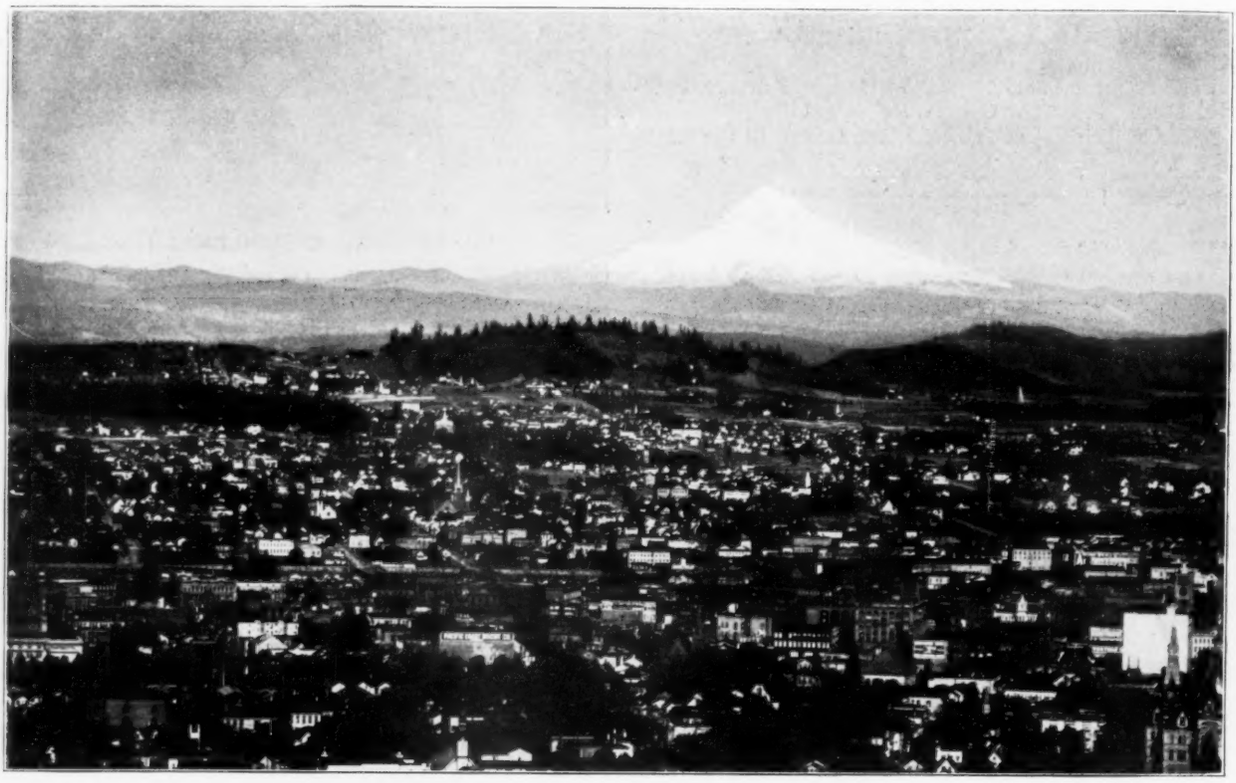

Fig. 12.—A view from Portland Heights, showing part of the city of Portland and Mt. Hood in the distance. Trips to the heights will be made by parties of members during the Portland session. Another view of Mt. Hood is given in Fig. 1.

It was the Lewis and Clark expedition, together with Gray's discovery of the mouth of the Columbia River that, after many vicissitudes and disputes, finally decided the claims to the Oregon country in favor of the United States. The winter of 1805-6 was spent by the expedition at Fort Clatsop, near the mouth of the Columbia.

The Lewis and Clark Exposition, to be held at Portland this summer, June 1 to October 15, was determined on as a fitting recognition of this important event in our national history.

Here will be brought together the representative products and resources of this marvelous section of our country that a hundred years ago was a wilderness, "where rolled the Oregon," "and heard no sound save its own dashing."

The selection of Portland as the meeting place of the American Medical Association will thus afford an especially favorable opportunity to the members of our profession to see and to become acquainted with this section of our country. To those who love the beautiful and the sublime in nature (and who does not?) this trip will prove a revelation, no matter where they may have been before. In no part of our country has nature been so lavish in her handiwork as in the West. The meadows and the cultivated fields of the East give way to the boundless plains; the beautiful and symmetrical views of the Appalachian chain of mountains are here represented in the Rockies, Cascades and Sierra Nevadas by natural scenery, wherein beauty is supplemented by awe-inspiring grandeur and symmetry by sublimity. By whatever route the visitor comes he will pass through some of this beautiful scenery before he reaches Portland. The view from Portland alone of the snow-capped peaks of Mt. Hood, Mt. St. Helens, Mt. Ranier, Mt. Adams and Mt. Jefferson with the Willamette and Columbia rivers in the foreground, is one that, competent critics say, is not to be had from any other city in the world.

Residents of Oregon while visiting in the East are often asked many embarrassing questions in regard to our state, such as whether it is not a "part of California" or "just south of Alaska"; whether we have any churches and school houses and are we not "afraid of the Indians." We do not anticipate any such questions from the members of the American Medical Association, but think that a few facts by way of suggestion may be of interest to many who are visiting us for the first time.

Oregon is over 300 miles square; so do not blame us if we do not happen to know your friend merely because he lives in Oregon. He may live three or four hundred miles from Portland, in several directions, and still be in Oregon. Our New England friends may be interested in knowing that Portland was named after Portland, Me., by a former resident of the "Pine Tree State," after having won the choice by the toss of a coin with a man from Boston.

Portland is on the Willamette River and *not* on the Columbia. (Accent the second syllable in Willamette, if you would appear "to the manor born." It is thirteen miles from the Columbia by water and 100 from the ocean at Astoria. It has a square area of forty miles; a population of 150,000 people; a system of city water works that cost $4,000,000, furnishing its inhabitants the purest water in the world, direct from the glaciers of Mt. Hood; 31 public schools, with 14,500 pupils. It has 180 miles of electric railway and 260 miles of improved streets. It has a delightful climate, and the mortality for 1904 was only 9.01 per thousand inhabitants.

Portland exports more wheat than any other Pacific Coast port, and its sawmills cut 400,000,000 feet of lumber a year.

Fig. 13.—Panoramic view of Columbia River, taken from St. Peter's Dome, at a height of 2,300 feet, and showing Arrowhead Mountain, Bridge of the Gods, and Mt. Adams. Castle Rock, at the edge of the water on the opposite bank, is 1,100 feet high. This is a scene on one of the complimentary excursions given to the members of the American Medical Association by the Committee of Arrangements.

It produces finer roses and more of them than any city in the world, as the Committee of Arrangements hopes to prove to visitors; and from the heights back of the city one can have a series of views that will pay for a trip across the continent.

The salmon industry of the Columbia River annually produces $3,000,000. Let not the piscatorial instincts of our sporting friends become unduly aroused, for it is a tradition that the British government more readily resigned its claim to Oregon because some Englishmen who had been here reported that the salmon would not rise to the fly. They do, however, readily take the spoon at the Falls of the Willamette during May and June. The accompanying photograph of 20 tons of salmon lying on the floor of a cannery shows in what numbers they are caught in gill-nets and seines. The season will

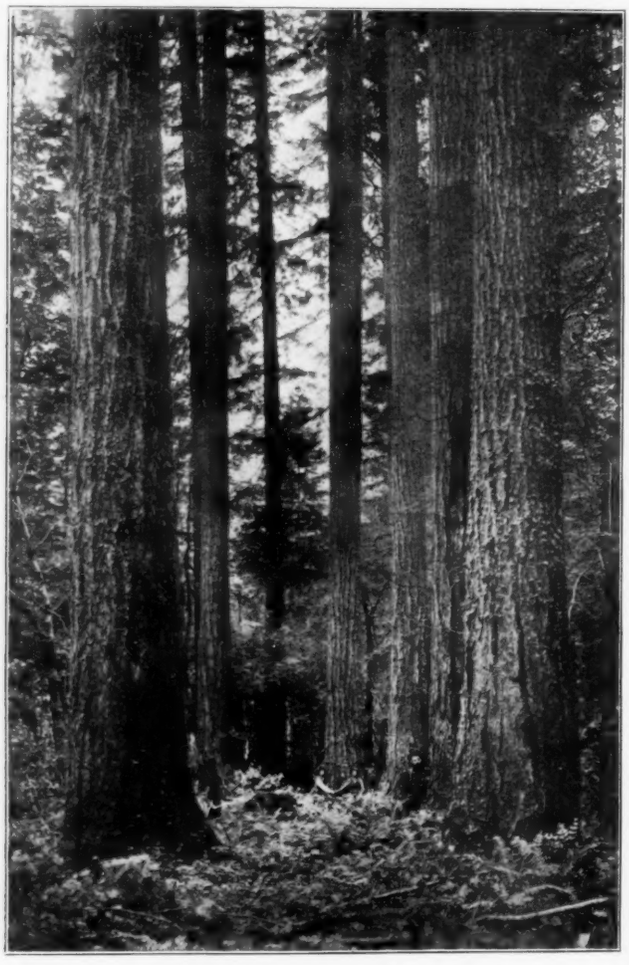

Fig. 14.—"Oregon underbrush," average height 250 feet.

be on during the session of the Association, and the salmon business may be seen in all its phases.

The river at Portland affords splendid opportunity to those who enjoy boating. There is no more delightful way of spending the long twilight July evenings in Oregon than by a ride up or down the river in a motor boat, or lazily bending to the quiet dip of the sculls.

Lastly, a word to the sportsmen. The mountains of Oregon and the Northwest abound in game and the streams are full of trout. If one can spare the time and slight expense, one can arrange to stop off at almost any point where one's route crosses the mountains on any of the various railroads and can enjoy one's self to the heart's content.

It has been the object of the writer of this article to avoid detailed description, for the reason that such description, to be of value, could not be brought within the proper limits. It has been thought that, next to the scientific interest of the meeting, the natural scenery of our great Northwest would be the one thing that would prove most attractive to our visitors. We have, for this reason, dwelt rather in suggestive generalities concerning the history, geography and resources of

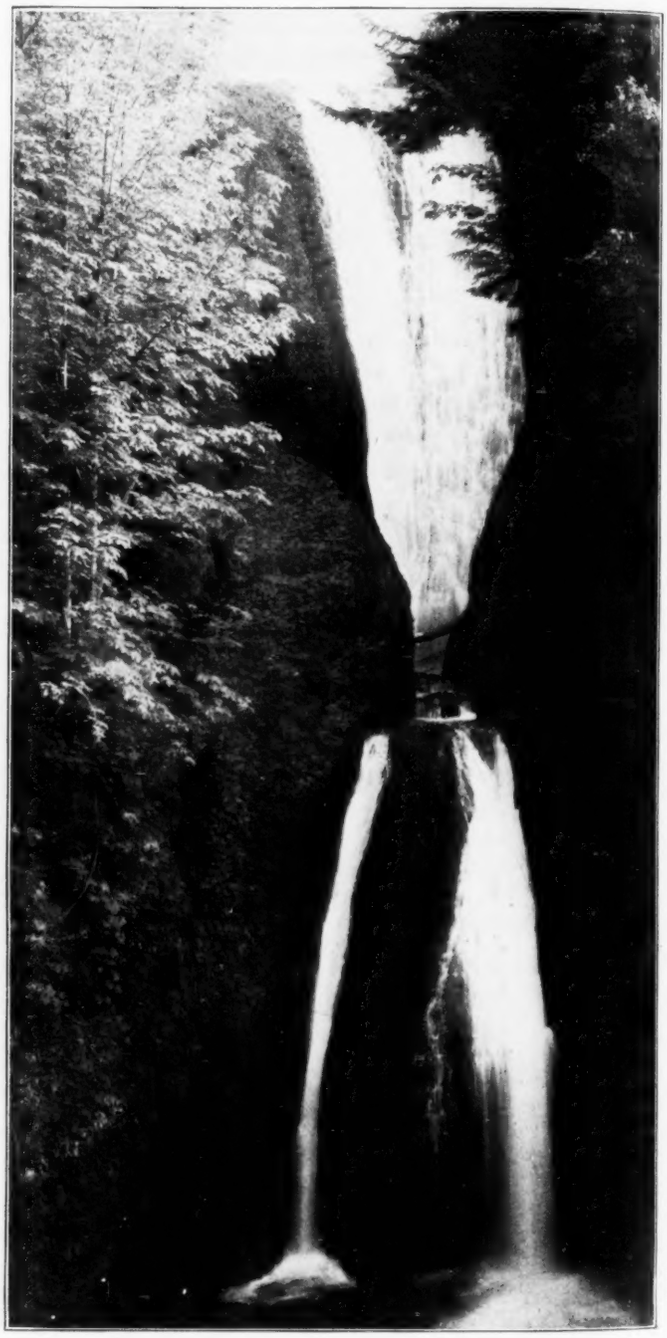

Fig. 15.—Bridal Veil Falls, 190 feet high, on the Columbia River.

our country and, for illustrations, have chosen material as characteristic of the far West and as different from other sections as we could find. We are sure that a trip to this meeting of the American Medical Association will give enlarged views of the size, diversity and grandeur of our great Republic and make better and broader Americans of us all.

The Committee of Arrangements extends to all a hearty

invitation to visit Portland, promising an abundant entertainment and a profitable and interesting time; and this, too, with a full appreciation of the reputation of the West for hospitality.

F. C.

RAILROAD RATES.

Favorable Excursion Rates Secured with Long Time Limit and Stopover Privileges.

The announcement of the Committee on Transportation, through Dr. M. L. Harris, Chicago, chairman, was made in THE JOURNAL, April 22, and showed that the rates were the best that the Association has ever secured.

COST OF ROUND TRIP.

To Portland, Oregon, going via any regular direct route, returning via same or any other regular direct route: From Missouri River points; Sioux City, Iowa; Omaha, Neb.; Kansas City, Mo.; St. Paul and Minneapolis, $45.00; From Chicago, $56.50. From St. Louis, $52.50. From New Orleans, $62.50.

To Portland, going via any regular direct route, returning via San Francisco or San Francisco and Los Angeles, and regular direct routes therefrom, or vice versa: From Missouri River points, $56.00. From St. Paul, $63.00. From Chicago, $67.50. From St. Louis, $63.50. From New Orleans, $71.00.

From all points east of Chicago and St. Louis, the rate will be one fare plus $1.00 added to the rates above given. The Missouri Valley is taken as a basis and is the junction between western and eastern passenger associations. The western associations make a fixed rate to Missouri River points; the eastern associations make a rate of one fare plus $1.00. Thus: Atlanta, Ga., $71.50; Boston, $79.50; New York City, $74.50; Washington, $73.00.

DATES TICKETS WILL BE SOLD.

These tickets will be on sale June 13, 14, 15, 19, 23, 24, 27, 28, 29, 30, July 1, 2, 3, 6, 7 and 8. These days apply to the points above mentioned. For points east of Chicago and St. Louis the date of sale will be advanced sufficiently to enable passengers to reach the points mentioned on any of the days specified. Tickets will be good for ninety days from date of sale, but not later than Nov. 30, 1905.

STOPOVERS.

Going passage must begin on date of sale and must be continued up to first Colorado, Wyoming, Texas or Montana point en route and up to Alliance, Neb., Ft. Williams, Ont., and St. Paul, on Nor. Pac. Ry. West thereof stopovers may be made at any point, going or coming, within final limit of ticket.

Returning stopovers will be allowed within final limit at any point west of the points mentioned above. While conditions governing stopovers are not complicated, they vary somewhat and had best be learned of the agent by each purchaser at the time tickets are purchased and of the joint agent at Portland, who has to stamp each excursion ticket to make it good for the return trip.

ROUTES TO THE PORTLAND SESSION.

Map of the Western Country and the Various Routes by Which to See Its Beauties.

DIRECT AND INDIRECT ROUTES.

We may class the various routes to Portland as direct and indirect, the former being all those on which the short-line rate will prevail, the indirect those which will carry the traveler a round-about route but at an additional railway fare. The latter, for example, permit the passenger for Portland to travel through California either going or returning, the other part of the trip to be by one of the direct lines. The principal routes are shown on the accompanying map.

By the direct routes, Chicago, St. Louis and Memphis passengers for Portland, or parties from points in the East or South ticketed through either of these three gateways, may, at their option, be routed through St. Paul and Minneapolis and thence to Portland via either the Canadian Pacific, the Great Northern or the Northern Pacific railways; or through Omaha or Kansas City, thence through Denver or Cheyenne and Salt Lake City, thence via Ogden, Utah, and Pocatello, Idaho (not via California from Ogden); or through Omaha or Kansas City and thence via Billings, Mont.

Without extra fare, the western or outgoing trip may be made by any of these so-called direct routes and the return by the same or any other of the direct routes; or one way may be by one of the indirect routes, as said above, by paying an additional charge, but the desired route must be determined on before buying the ticket so that the latter may be made out accordingly.

DIRECT ROUTES VIA ST. PAUL.

Tickets may be routed over any one of the lines between Chicago and St. Paul at the passenger's option, these being the Northwestern Line; the Chicago, Milwaukee and St. Paul; the Chicago, Burlington and Quincy; the Wisconsin Central; the Chicago, Rock Island and Pacific; the Illinois Central, and the Chicago Great Western. After reaching St. Paul the traveler via this gateway has choice of but three routes from there to Portland, the Great Northern, the Northern Pacific or the Canadian Pacific.

DIRECT ROUTES VIA OMAHA.

The railway lines that connect Chicago and St. Paul, noted above, also operate between Chicago and Omaha. The Burlington also offers its own line to Billings, Mont., from which point its trains run to Seattle over the Northern Pacific Railway. The Chicago, Union Pacific and Northwestern Line has a daily service direct from Chicago to Portland without change.

Passengers using any other of the Chicago-Omaha lines may be ticketed to travel via any of the lines west from Omaha, at their option, these lines being the Burlington, the Rock Island and the Union Pacific. Each of these affords excellent service between Omaha and Portland via Denver and Salt Lake City, via Denver and Cheyenne and Salt Lake City, or via Cheyenne direct (main line of Union Pacific); or via Billings, Mont. From Denver to Portland the passenger has the further choice of traveling to Portland via either the Denver and Rio Grande, the Colorado Midland or the Union Pacific, via Salt Lake City, Ogden and Idaho.

DIRECT ROUTES VIA KANSAS CITY OR ST. JOSEPH.

Between St. Louis and Kansas City or St. Joseph similarly excellent service to that via St. Paul or Omaha is offered by the following lines: Chicago and Alton; Chicago, Burlington and Quincy; Missouri Pacific; Chicago, Rock Island and Pacific, and the Wabash.

Between Chicago and Kansas City the same lines operate—except the Missouri Pacific—and in addition the Santa Fe, the Chicago, Milwaukee and St. Paul, and the Chicago Great Western.

From either point Portland passengers may travel via the Kansas City or St. Joseph gateway, if preferred, then through Denver, Salt Lake City and Ogden, Cheyenne and Ogden, or through Billings. Such routings will be, beyond Denver, by one of the lines noted above under Omaha routings through Denver, etc. For that portion of the journey between Kansas City and Colorado, one has choice between the Burlington, the Rock Island, the Santa Fe, the Missouri Pacific and the Union Pacific, the first three having their own lines from Chicago to Denver via Kansas City, the first two and the Missouri Pacific their own lines from St. Louis to Denver via Kansas City.

INDIRECT ROUTES.

These are the routes by which the Portland passenger is carried through California either on the outgoing or on the return portion of the trip, an extra fare being charged therefor, with the requirement that the other portion of the trip shall be by one of the direct routes. All the indirect routes lead through California, and may be by boat or rail between Portland and San Francisco; and from the latter city the route may be eastward across Nevada and through Ogden, thence via any of the lines mentioned under direct routes, to destination; or from San Francisco the ticket may read via southern California, and to destination by any of the southern lines—the

Santa Fe, the Rock Island, and the Southern Pacific. The former runs via the San Joaquin Valley and Mojave, then through Arizona and Albuquerque, N. M., the latter either by the San Joaquin Valley or its Coast Line to Los Angeles and El Paso, and on to New Orleans; the Rock Island runs via Los Angeles, using Southern Pacific tracks to El Paso, whence it takes a northwesterly course through southern New Mexico to eastern termini. Further optional routes are available east of El Paso, if the passenger prefers to travel through Fort Worth, San Antonio or Dallas, thence via any of the numerous lines through St. Louis, Kansas City or Chicago. Tickets routed through New Orleans may be over any of the several lines north and east of that city, at the option of the passenger.

DETAILS OF THESE ROUTES.

The above summary is abstracted from an article in THE JOURNAL, April 22, which described the scenic attractions of the various routes referred to, and discusses the places at which stopovers could be made with pleasure and profit. In addition, members are reminded that all the railroad companies mentioned will be glad to send booklets descriptive of their roads and the territory passed through and to advise about itinerary.

THE SOO-PACIFIC ROUTE.

In the article referred to above, the "Soo-Pacific route" was not explained. The traveler over this line will go from St. Paul and Minneapolis over the Minneapolis, St. Paul and Sault Ste. Marie Railway, through North Dakota and Canada, to the main line of the Canadian Pacific, and on that line across the mountains. The Canadian Pacific is reached at Pasqua, near the center of the Province of Assiniboia, Canada, and it may surprise the one who has not recently looked at a map to learn that on reaching this point the traveler from St. Paul has already gone more than half way to the coast. This emphasizes the immense area of the state of North Dakota, cornerwise through which state is a considerable portion of this particular portion of the Soo line. Here roll the vast prairies of the Dakotas, here roams herd after herd of cattle, which will later go to Chicago to feed the world; here stretch miles of the finest wheat fields. Nearer St. Paul one passes through part of the lake region of Minnesota, where delightful stops for fishing trips may be made. These charming little lakes, set in between the green Minnesota hills, each with its little group of summer hotels, are famous for their fish and their scenery. It may also be noted that Minnesota is the world's largest producer of flax. Canada, this side of the Rockies, is as level as are our own western plains, and when the Canadian Rockies

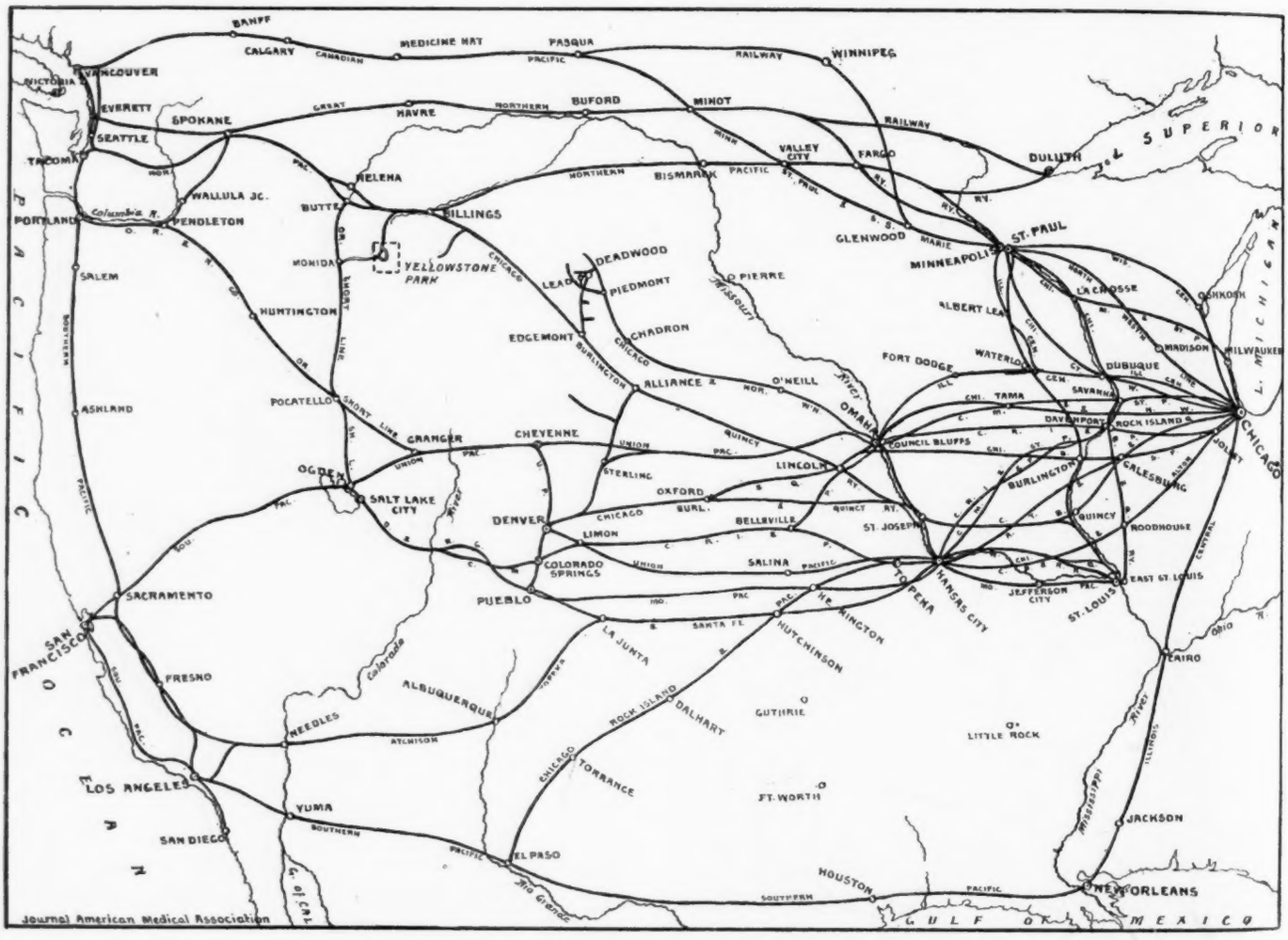

Fig. 16.—Map of the various western routes to and from Portland.

are reached, the contrast between their rugged scenery and the level contour of the land seen the day before is most entertaining. Higher and higher winds the train and more abruptly break the rocky chasms. The scenery on the Canadian Pacific is said to surpass that of the Alps, and we note with interest that several of the trains mentioned below are to stop for several hours or for a whole day at several of the most striking spots in the Canadian Rockies. Banff, Laggan, Field, Glacier—words fail in attempting to describe the stupendous character of the scenery, its marvelous variety of shade and color, the endless details that grow on one as one gazes in awe.

Although it is most pleasant that the arrangements for the Portland trip allow a return by a different route, so that a great variety of scenery may be seen, many a traveler ex-

presses the desire to sit in silence and gaze on Mt. Stephen or down the Illecillewaet River valley, loth to be hurried on from such a wonderful view by the steed of steel. There is an indescribable added grandeur—richness—atmosphere—in leaving the railroad and all of man's marks behind and climbing off where only untouched nature remains. The opportunity for this is afforded by the brief stops that are made on many of the following trips.

SPECIAL TRAINS TO PORTLAND.

Abundant Accommodations for Through Service to Portland in Good Company.

In arranging the itinerary of a trip through the beautiful scenery of the West by some of the various routes mentioned above the physician is offered many special trains. The particular advantages of these are, first, the through service (that is, no change of cars is necessary), and second, the companionship of members of the profession, perhaps acquaintances, on the journey. The physician who does not find the arrangements that he desires among these special trains can go on the regular trains of the routes desired, although most of such trains will require change of cars. Some roads run sleepers through to Portland, and information should be received from the particular road concerned.

We mention below the essential details as to the time of starting of these trains and cars as far as the information has come to our notice. Arrangements may be made for other special trains. In accordance with the announcement in THE JOURNAL, May 13, page 1547, we publish below the lists which have been sent us of those who have made reservations on these special trains. It will be understood that many others have not yet definitely decided as to the time of departure, etc., and that their names are not included. Especially is the matter unsettled in the case of the trains which leave late and go through without stopovers. Errors in names may have occurred, due to transcribing of names by railroad clerks and others.

New England.

NEW ENGLAND SPECIAL.—Special cars to accommodate members of the A. M. A. Outing Club and others from New England will probably leave Boston, June 27, for a trip of four weeks or more over the Chicago, Milwaukee & St. Paul and the Northern Pacific railroads, stopping five and one-half days at Yellowstone Park, and returning from Portland by the Canadian Pacific to Montreal, making short stops in the Canadian Rockies. A different return route may be used. The party can be joined at any point en route. Address for particulars, Dr. E. R. Campbell, Bellows Falls, Vt.

New York and Philadelphia.

NEW YORK AND PHILADELPHIA SPECIAL.—This train will leave New York City at 6:55 p. m. and Philadelphia at 7:50 p. m. Saturday, June 24, for a forty-day trip to Portland and return, stopping six and one-half days at Yellowstone Park, and passing through San Francisco, Los Angeles, Salt Lake City, Denver and Niagara Falls on the return, reaching the starting points, Thursday morning, August 3. This trip will include visits to the Royal Gorge, Manitou, Pike's Peak, Cripple Creek, Garden of the Gods, the famous Georgetown Loop, a day in Chicago, etc. This party is limited to one hundred and twenty-five persons, and at our last advice a few reservations only were still unspoken for. Further information may be secured from Dr. Frederick Holme Wiggin, 55 West Thirty-sixth street, New York, or Dr. Cyrus Lee Stevens, Athens, Pa.

The following is a list of those who have made definite reservations on this train:

Dr. and Mrs. Dexter D. Ashley, ...New York City.
Dr. J. Riddle Goffe.....New York City
Dr. and Mrs. John T. Nagle and sister-in-law.....
.....New York City.
Dr. Thomas F. Reilly.....New York City
Dr. E. Franklin Smith.....New York City
Dr. and Mrs. J. P. Tuttle.....New York City
Dr. and Mrs. Wisner R. Townsend and the Masters Townsend .....New York City
Dr. Frederick Holme Wiggin and Son...New York City
Dr. and Mrs. L. Grant Baldwin.....Brooklyn, N. Y.
Dr. William Francis Campbell.....Brooklyn, N. Y.
Dr. Mary E. Dunning.....Newburgh, N. Y.
Miss Hill .....Newburgh, N. Y.
Dr. and Mrs. C. E. Townsend.....Newburgh, N. Y.
Dr. Eugene Baker.....Ithaca, N. Y.
Dr. J. Orley Stranahan.....Rome, N. Y.
Dr. C. E. Cuddeback.....Port Jervis, N. Y.
Mr. and Mrs. Charles Landell.....Bayonne, N. J.
Dr. and Mrs. Forman.....Bayonne, N. J.
Dr. and Mrs. J. Fewsmith and Miss Fewsmith.....
..... Newark, N. J.
Messrs. G. Gilbert and Alan H. Brown..Newark, N. J.
Dr. and Mrs. E. Hollingshead.....Pemberton, N. J.
Mrs. Price .....Pemberton, N. J.
Miss Allan .....Pemberton, N. J.
Dr. and Mrs. Marcus F. Squier.....Harrison, N. J.
Dr. Frank W. Stevens ..... Bridgeport, Conn.
Dr. and Mrs. William Witter.....Norwich, Conn.
Dr. and Mrs. C. L. Stevens.....Athens, Pa.
Dr. E. W. Evans .....Easton, Pa.
Dr. and Mrs. J. G. Zern .....Lehighton, Pa.
Dr. John Welsh Croskey.....Philadelphia, Pa.
Dr. J. V. Kelly.....Philadelphia, Pa.
Dr. M. H. Russell.....Philadelphia, Pa.
Dr. D. D. Custer.....Philadelphia, Pa.
Dr. H. K. Regar.....Philadelphia, Pa.
Dr. and Mrs. J. W. Ellenberger.....Harrisburg, Pa.
Mr. Ellenberger, Jr.....Harrisburg, Pa.
Dr. and Mrs. I. C. Gable.....York, Pa.
Mr. Gable, Jr.....York, Pa.
Dr. and Mrs. Holtzapple.....York, Pa.
Miss Holtzapple.....York, Pa.
Mr. and Mrs. Glatfelter.....Spring Grove, Pa.
Mr. Glatfelter, Jr.....Spring Grove, Pa.
Dr. and Mrs. S. L. Wiggin.....McKeesport, Pa.
Dr. and Mrs. O. F. Kistler and niece..Wilkesbarre, Pa.
Dr. and Mrs. Frederick Baldwin.....Danvers, Mass.
Dr. F. H. Thompson and friend.....Fitchburg, Mass.

Indianapolis.

INDIANA STATE MEDICAL SOCIETY.—Sleeping cars will leave Indianapolis on the Pennsylvania lines June 30, 11:50 p. m., and will join the Yellowstone Park Special (for further particulars of which see below) leaving Chicago 11 a. m., July 1. Leaving Portland, July 17 the return will be over the Northern Pacific to Seattle, Canadian Pacific steamer to Vancouver, and home by the Canadian Pacific, the Soo Line, the Burlington route and Pennsylvania lines consecutively; with stopovers at Seattle, Victoria, Vancouver, Glacier (24 hours), Banff, Canadian National Park (24 hours). The return, however, may be made by any other route desired. For further particulars, address Dr. Frank B. Wynn, Newton Claypool Bldg., Indianapolis. The following have made definite reservations:

Dr. W. N. Wishard and wife.....Indianapolis
Dr. T. B. Eastman and wife.....Indianapolis
Dr. H. O. Pantzer and wife.....Indianapolis
Dr. A. E. Stearne and wife.....Indianapolis
Dr. Frank B. Wynn and wife.....Indianapolis
Dr. F. C. Heath and wife .....Indianapolis
Dr. C. E. Ferguson and wife .....Indianapolis
Dr. John L. Freeland and wife .....Indianapolis
Dr. W. H. Ristine and wife.....Crawfordsville
Dr. L. J. Willien .....Terre Haute
Dr. J. T. Freeland and wife.....Bedford
Dr. M. G. Moore, wife and son.....Vincennes
Dr. W. S. Williams and wife.....Kendallville
Dr. C. D. Kimball and wife .....Kendallville
Dr. J. W. Cook and wife .....Pendleton
Dr. J. H. Green and wife .....North Vernon
Jennie H. Smith.....Greencastle
Flora Lammers and daughter.....Greencastle

Nashville.

Special cars are to leave Nashville, Tenn., July 4, to reach Portland July 10, passing through St. Louis, Denver and Salt Lake City, and returning by the Yellowstone Park and St. Paul. There will be stopovers in Colorado and at Salt Lake City. Address for further particulars Dr. G. C. Savage, Nashville, Tenn. The following are planning to go:

Dr. and Mrs. J. A. Witherspoon.....Nashville, Tenn.
Dr. and Mrs. J. T. Altman.....Nashville, Tenn.
Dr. W. A. Bryan.....Nashville, Tenn.
Dr. Louis Leroy .....Nashville, Tenn.
Dr. G. C. Savage and daughter.....Nashville, Tenn.
Dr. and Mrs. E. A. Cobleigh.....Chattanooga, Tenn.
Dr. Holtzclaw .....Chattanooga, Tenn.
Dr. C. A. Abernathy .....Pulaski, Tenn.
Dr. Shields Abernathy.....Pulaski, Tenn.
Dr. J. Ross Snyder and three confrères.Birmingham, Ala.
Dr. and Mrs. A. W. Calhoun.....Atlanta, Ga.
Dr. and Mrs. Floyd W. McRae.....Atlanta, Ga.
Dr. and Mrs. W. D. Haggard.....Nashville, Tenn.
Dr. and Mrs. M. E. Aldersen.....Russellville, Ky.
Dr. Piper .....Russellville, Ky.
Dr. C. N. Clarke .....Mount Pleasant, Tenn.
Dr. Hazel Padgett.....Columbia, Tenn.

Michigan.

MICHIGAN STATE MEDICAL SOCIETY SPECIAL.—Those who take this train will leave all Michigan points Monday, July 3, in time to take the special at Chicago, which leaves at 5:30 p. m. over the C. R. I. & P. Railroad for St. Paul, thence by

the Soo Line (referred to elsewhere) and the Canadian Pacific, stopping at several points in the Canadian Rockies. Between Vancouver and Seattle the trip will be made on the Canadian Pacific Railway Steamer. No fixed return itinerary is planned. For further particulars address Dr. F. W. Robbins, 73 Cass Ave., Detroit. Those who have thus far made reservations are as follows:

Dr. Willis Anderson....Detroit
Dr. and Mrs. Chas. T. McClintock....Detroit
Dr. and Mrs. F. W. Robbins....Detroit
Dr. Walter P. Manton and family (5)....Detroit
Dr. W. R. Chittick....Detroit
Prof. F. L. Bliss....Detroit
Dr. F. D. Wheeler....Detroit
Dr. Wm. J. Stapleton, Jr....Detroit
Dr. and Mrs. O. H. Lau....Detroit
Miss Davis....Detroit
Miss Kenseth....Detroit
Dr. and Mrs. D. R. Clark....Dearborn
Dr. M. G. Day....Ann Arbor
Miss Alice Anthony....Bryn Mawr, Pa.
Dr. W. F. Dodge and family (6)....Big Rapids
Dr. W. L. Godfrey....Battle Creek
Dr. W. K. West....Calumet
Mrs. and Miss Lawbaugh....Calumet
Geo. A. Robbins, Esq....Chicago
Miss E. M. Palmer....Chicago
Dr. B. H. McMullen and family (4)....Cadillac
Dr. and Mrs. Collins H. Johnston....Grand Rapids
Dr. A. E. Savage....Gowen
Dr. and Mrs. G. M. Livingston....Manistique
Dr. and Mrs. Phil H. Quick....Olivet
Miss Quick....Olivet
Mrs. and Miss Ely....Olivet
Miss Hasford....Olivet
Dr. and Mrs. Chas. B. Stockwell....Port Huron
Dr. and Mrs. Mortimer Willson....Port Huron
Family of Dr. Willson (2)....Port Huron
Dr. and Mrs. M. S. Boyer....Philadelphia
Dr. James Yates....Roseville
Miss Lapsley....Roseville
Dr. and Mrs. H. V. Brooks....Saginaw
Dr. and Mrs. E. E. Curtis....Saginaw
Miss Coleman....Saginaw

Chicago.

YELLOWSTONE PARK SPECIAL.—This train will be in two sections, both running over the Chicago, Burlington and Quincy Railroad to Minneapolis, thence by the Northern Pacific to Portland, stopping at Yellowstone Park. The first section will leave Chicago, June 30, will reach Yellowstone Park July 2, and will reach Portland on the morning of July 10. The second section will leave Chicago July 1, reach the Park July 3, and will reach Portland on the afternoon of July 10. Each of these trains will accommodate but one hundred and twenty-five persons, and the reservations are almost all spoken for. For further particulars address Mr. F. E. Bell, City Passenger Agent, Burlington route, 211 Clark street, Chicago.

The following have definitely reserved accommodations for themselves and those who will go with them. (In many cases we are not informed as to the number in the party.)

FIRST SECTION JUNE 30.

Dr. Wm. F. Bacon (2)....York, Pa.
Dr. and Mrs. F. D. Bain....Kenton, Ohio
Dr. and Mrs. John S. Beck....Dayton, Ohio
Dr. and Mrs. Henry W. Bettmann....Cincinnati
Dr. C. L. Bonifield....Cincinnati
Dr. C. M. Bowcock (4)....Springfield, Ill.
Dr. R. E. Buchanan....Independence, Iowa
Dr. Henry A. Christian....Boston
Will C. Braun....Chicago
Dr. N. S. Davis....Chicago
Dr. F. M. Elliott....Aurora, Ill.
Dr. and Mrs. J. Harvey Fronfield and daughter (3)....Media, Pa.
Dr. and Mrs. W. S. Foster....Pittsburg
Dr. and Mrs. Chas. R. Grandy....Norfolk, W. Va.
Dr. and Mrs. George Goodhue....Dayton, Ohio
Dr. and Mrs. J. R. Guthrie....Dubuque, Iowa
Dr. Elma Griggs (2)....Ithaca, N. Y.
Dr. J. H. Glass....So. Fork, Pa.
Dr. Benj. H. Grove....Buffalo, N. Y.
Dr. Robert Hessler....Logansport, Ind.
Dr. and Mrs. J. W. Hairgrove....Jacksonville, Ill.
Dr. M. L. Heidingsfeld....Cincinnati, Ohio
Dr. and Mrs. C. F. Lehnkering....Darlington, Wis.
Dr. Joseph Lowe....Cincinnati, Ohio
Dr. A. M. McKibben....Pittsburg, Pa.
Dr. M. Manges (2)....New York
Dr. E. L. Mitchell....Monmouth, Ill.
Dr. and Mrs. A. Marcy, Jr....Riverton, N. J.
Miss Hannah Marcy....Riverton, N. J.
Miss Lenora Wright....Riverton, N. J.
Dr. C. P. Morrell....No. Andover, Mass.
Dr. H. O. Marcy and son (2)....Boston, Mass.
Dr. F. A. Neville....Meredosia, Ill.
Dr. Maurice Ostheimer....Philadelphia
Dr. and Mrs. J. F. Pember and 2 friends....Janesville, Wis.
Dr. J. A. Pratt....Aurora, Ill.
Dr. M. L. Rhein....New York
Dr. B. L. Riese and mother (2)....Chicago
Dr. Jesse Snodgrass....Kenton, Ohio
Dr. F. C. Swan (3)....So. Chicago, Ill.
Dr. F. Schill, Jr....Johnstown, Pa.
Dr. J. A. Tuthill....Le Roy, Ill.
Dr. L. C. Taylor....Springfield, Ill.
Dr. R. C. Teschan (2)....Milwaukee, Wis.
Dr. C. O. Thienhaus....Milwaukee, Wis.
Dr. W. C. Watson....Lima, Ohio
Dr. and Mrs. E. F. Woods....Janesville, Wis.
Dr. and Mrs. H. G. Wilbur....Fall River, Mass.
Dr. D. I. Wolfstein....Cincinnati, Ohio
Miss Westfall....Dayton, Ohio
Dr. Silver....New York
Dr. R. S. Varros and party....Chicago
Dr. Cook....Chicago

SECOND SECTION, JULY 1.

A. Alguire....Belvidere, Ill.
M. K. Allen....Louisville, Ky.
Dr. and Mrs. Frank T. Andrews, mother and son (5)....Chicago
Dr. Robert C. Bourland....Rockford, Ill.
Dr. and Mrs. J. Frederick Herbert....Philadelphia
Dr. Chas. H. Emery (2)....Bedford, Ind.
Dr. W. R. Fringer....Rockford, Ill.
Dr. and Mrs. J. Frederick Herbert....Philadelphia
Dr. D. S. Hanson....Cleveland, Ohio
Dr. J. A. Johnston and sister (2)....Cincinnati, Ohio
Dr. Wm. E. Lower....Cleveland, Ohio
Dr. W. P. Long....Weatherly, Pa.
Dr. and Mrs. Geo. E. Malsbary....Cincinnati
Dr. W. N. Pringle....Johnstown, Pa.
Dr. Julia Riddle....Oshkosh, Wis.
Dr. John U. Riggs....Bryan, Ohio
Dr. D. G. Smith and party....Elizabeth, Ill.
Dr. J. S. Stribling....Seneca, S. C.
Dr. and Mrs. Schuman....Columbia City, Ind.

(Three cars of this train are being filled with Ohio and Indiana physicians and their friends.)

CHICAGO MEDICAL SOCIETY SPECIAL.—This train will leave Chicago July 6 at 7:30 p. m., and will arrive at Portland at 8 a. m., Monday, July 10, passing over the Chicago, Milwaukee and St. Paul and the Northern Pacific railroads. Stopover points include St. Paul, Spokane and points in the Rockies and Cascades. This train will be a luxurious on, with compartment car, observation car and other sleepers, as well as a dining car, which remains on the train throughout the trip. It will be noted that this train starts only in time to reach the Portland session, and the return trips of those who go by this train may be made by various routes, according to the time at each one's disposal. Address for particulars the secretary of the society, Dr. F. X. Walls, 103 State street, Chicago, or Mr. C. A. Matthews, general agent, passenger department, Northern Pacific Ry. Co., 208 S. Clark St., Chicago.

The following have made reservations:

MINNEAPOLIS.

Dr. C. W. Bishop.
Dr. W. A. Hall.
Dr. R. S. Brown.
Dr. J. H. Stuart and wife.
Dr. H. H. Kimbal and wife.
Dr. Edw. Estabrook.
Dr. C. M. Kistler.
Dr. Wm. B. Murphy.
Dr. H. M. Orton.
Dr. A. Soderling.
Dr. C. D. Whipple.
Dr. C. B. Wright.
Dr. E. J. Brown.
Dr. H. A. Cohen.
Dr. W. S. Laton.
Dr. J. D. Simpson.
Dr. A. M. Wang.
Dr. C. G. Weston.

CHICAGO.

Dr. W. C. Abbott (2).
Mr. S. DeWitt Clough (2).
Dr. Frank X. Walls (2).
Dr. W. F. Waugh (2).
Dr. Stemmel, Macomb, Ill.
Dr. Wilson (2).
Dr. M. L. Harris (2).
Dr. C. R. Ogden (2).
Dr. Pennington (2 or 3).

SPECIAL OVERLAND LIMITED TRAIN.—This is one of the quickest trains to Portland. It will leave Chicago Thursday, July 6, at 8:02 p. m., and will reach Portland Sunday, July 9, at 5:25 p. m. This train passes over the Chicago and Northwestern and the Union Pacific railroads, the Oregon Short Line, and the Oregon Railroad and Navigation Co.'s line through southwestern Idaho, the Blue Mountains and Columbia River country. Dr. Lewis S. McMurtry is arranging a party which will spend six days in Yellowstone Park on the return trip. Address for further particulars the nearest member of the committee on arrangements or Mr. H. A. Gross, General Passenger Agent, Chicago and Northwestern Railroad, 212 Clark Street, Chicago. The committee of arrangements is as follows: S. C. Stanton, M.D. 1604, 59 State St., Chicago; Heinrich Stern, M.D., 56 E. 76th St., New York City; Lewis S. McMurtry, M.D., Louisville, Ky.; Wm. Warren Potter, M.D., Buffalo, N. Y.; Florus F. Lawrence, M.D., Columbus, Ohio; Simon P. Scherer, M.D., Indianapolis; Charles A. L. Reed, M.D., Cincinnati.

On this same route is operated a daily through train to Portland on the same fast schedule. For particulars address Mr. Gross as above.

SCENIC LINE SPECIAL.—This train will leave Chicago at 10 p. m., Thursday, July 4, and will reach Portland Monday, July 10, in the afternoon, running on the Burlington route, Denver and Rio Grande, Oregon Short Line, and the Oregon Railroad Company's Navigation Lines, and will stop for sightseeing at Colorado Springs, Glenwood Springs and Salt Lake City. This train will go through the Royal Gorge, Tennessee Pass and other points on the famed Denver and Rio Grande line. Passengers may return from Portland by any route they desire. For information address Mr. F. E. Bell, City Passenger Agent, Burlington Route, 211 Clark street, Chicago.

GATES' TOUR.—OPHTHALMOLOGY SPECIAL.—The officers and a number of the members of the Section on Ophthalmology and some members of the Section on Laryngology and Otology plan to go to Portland in a special car run by the Gates' Tour excursion. This will leave Chicago Monday, July 3, at 10 p. m., by the Chicago and Northwestern Railway, and from Minneapolis on will run over the Soo Line (referred to elsewhere) and the Canadian Pacific. Stops will be made at Banff, Field, Glacier, etc. The return may be by the Northern Pacific and Yellowstone Park, or otherwise. Further information may be had of Chas. H. Gates, 419 Madison av., Toledo, Ohio. Those of the party who have already made reservations are as follows:

Prof. J. Hirschberg.....Berlin, Germany.
Dr. and Mrs. C. R. Holmes.....Cincinnati
Dr. and Mrs. Arthur E. Bulson.....Fort Wayne, Ind.
Dr. Robert C. Myles and family.....New York City
Dr. and Mrs. H. V. Würdemann .....Milwaukee, Wis.
Dr. and Mrs. J. E. Weeks.....New York City
Dr. S. D. Risley.....Philadelphia
Dr. and Mrs. Geo. K. Swinburne.....New York City
Dr. and Mrs. T. W. Moore.....Huntington, W. Va.
Dr. and Mrs. W. C. Chapman.....Toledo, Ohio
Dr. and Mrs. W. H. Snyder.....Toledo, Ohio
Dr. and Mrs. Jas. A. Duncan.....Toledo, Ohio
Dr. S. B. Hiner .....Lima, Ohio
Dr. J. A. Kimmell.....Findlay, Ohio
Dr. W. S. Bryant.....New York City
Dr. and Mrs. E. B. Dench.....New York City
Dr. W. Campbell Posey.....Philadelphia
Dr. W. Zentmayer.....Philadelphia

St. Louis.

Two parties will go from St. Louis over the Burlington Route and the Northern Pacific Railroad, one leaving St. Louis June 27 and visiting the Yellowstone and Puget Sound on the out trip, the other leaving July 6 and going direct to Portland. Reservations may be made by addressing Dr. T. A. Hopkins, 319 Century building, St. Louis.

So far as known, those who expect to go on this trip from St. Louis are as follows:

Dr. H. A. Auler.
Dr. J. H. Amberland and wife.
Dr. Frances L. Bishop.
Mr. G. R. Blickhahn and wife.
Dr. I. H. Cadwallader.
Dr. W. B. Dorsett.
Dr. W. L. Dickerson and wife.
Dr. O. H. Elbrecht.
Dr. Pinckney French.
Dr. J. P. Hennerich.
Dr. Roland Hill.
Dr. J. H. Tanquary and wife.
Dr. C. H. Hughes.
Dr. J. M. Long.
Dr. J. R. Lemen.
Dr. F. J. Lutz.
Dr. L. H. Laidley.
Dr. A. R. Kieffer and wife.
Dr. C. M. Nicholson.
Dr. Wm. Porter.
Dr. W. H. Stauffer.
Dr. R. E. Schlueter.
Dr. B. E. Stockwell.
Dr. F. G. Taussig.
Dr. T. A. Hopkins.
Dr. Meyer Wiener.
Dr. Bransford Lewis and wife.

Kansas City, St. Joseph and Omaha.

Party No. 1 will leave Kansas City Thursday evening, June 29, at 6:10 p. m.; St. Joseph, 8:25 p. m.; Omaha, 11:10 p. m.; and Lincoln Friday, June 30, at 1:20 a. m. This party will arrive in Yellowstone Park Saturday morning, July 1, will remain there about six days, and will reach Portland Sunday evening, July 9.

Party No. 2 will leave Kansas City, St. Joseph, Omaha, etc., on the evening of July 5 and go direct to Portland. The return trip may be by various routes. These trains will go by the Burlington route. For further particulars address Dr. John Punton, 532 Altman Bldg., Kansas City, Mo., or Dr. Chas. Wood Fassett, St. Joseph, Mo.

The reservations that have already been made on this train are as follows:

Dr. John Punton and wife.....Kansas City, Mo.
Dr. S. C. James and wife.....Kansas City, Mo.
Dr. William Frick and wife.....Kansas City, Mo.
Dr. E. Armstrong .....Greenleaf, Kansas
Dr. F. D. Morse.....Lawrence, Kansas
Dr. C. M. Castle .....Wymore, Neb.
Dr. and Mrs. R. C. Moore and daughter.....Omaha
Dr. W. O. Bridges.....Omaha
Dr. and Mrs. B. F. Crummer.....Omaha
Dr. and Mrs. A. A. Ashby.....Red Oak, Iowa
Dr. and Mrs. J. M. Knott and two.....Sioux City, Iowa
Dr. S. F. Sanders and daughter.....Holdredge, Neb.
Dr. W. B. Kern.....Hastings, Neb.
Dr. C. S. Chamberlain and daughter.....Cincinnati
Dr. C. A. Dannaker .....Kansas City
Dr. John Punton .....Kansas City
Dr. Dora Greene-Wilson.....Kansas City
Dr. T. H. Doyle .....St. Joe
Dr. and Mrs. Chas. Wood Fassett.....St. Joseph
Dr. L. W. Shannon and sister.....Hiawatha, Kan.
Dr. and Mrs. I. N. Picket.....Odell, Neb.
Dr. Hugh B. Coffey .....Pittsburg, Kan.
Dr. and Mrs. F. M. Daily.....Beloit, Kan.

Des Moines.

A special Iowa car will leave Des Moines at noon, June 30, Omaha at 11:20 p. m., reaching Yellowstone Park on the morning of July 2. After six days the party will leave for Portland and will arrive July 10.

The second car will leave Des Moines July 6, and will join the first car above mentioned at Yellowstone Park and both will go on to Portland together. Both cars will traverse the Burlington route by way of Billings and the Northern Pacific. No fixed return route is planned. Address Dr. J. W. Cokenower, Des Moines, Iowa.

St. Paul and Minnesota.

MINNESOTA SOCIETIES' SPECIAL.—The special train of the Minnesota State Medical Society, the Minnesota Academy of Medicine, the Ramsey County Medical Society, and the Hennepin County Medical Society, will leave St. Paul, June 29, at 10 p. m., and Minneapolis at 10:30 p. m., reaching Yellowstone Park July 1, and leaving July 6, arriving at Portland July 9 about 6 a. m. The trip will be over the Northern Pacific Railroad. Further particulars may be obtained of C. F. McNeill, C. P. & T. A., Northern Pacific Railway, Minneapolis, or Geo. D. Rogers, C. P. & T. A., Northern Pacific Railway, St. Paul. The following have made reservations:

Dr. C. A. Erdman .....Minneapolis
Dr. H. M. Workman .....Minneapolis
Dr. A. W. Abbott .....Minneapolis
Dr. and Mrs. W. A. Jones .....Minneapolis
Dr. and Mrs. W. J. Byrnes .....Minneapolis
Dr. and Mrs. J. W. Little .....Minneapolis
Dr. and Mrs. C. Nootnagle.....Minneapolis
Dr. and Mrs. J. E. Engstad.....Grand Forks, N. Dak.
Dr. Ira W. Bedle .....Tracy, Minn.
Dr. R. J. Hubbard .....St. Cloud, Minn.
Dr. and Mrs. E. C. Eberlin and daughter..Glenwood, Minn.
Dr. Evans (party of 3) .....La Crosse, Wis.
Dr. and Mrs. C. C. Knapp .....Zanesville, Ohio

PORTLAND'S HOTELS.

A List of Hotels and Information as to Other Accommodations.

The following hotels have been selected for accommodation as the best out of some 100 hotels and boarding and rooming houses, listed by the Press Bureau of the Lewis & Clark Fair:

Hotel Portland, Sixth and Morrison, European plan, $5.00 to $7.00; two in room, $2.50 to $3.50 per person.
The Calumet, Seventh and Alder, $1.50 to $2.00 per room.
Eaton Hotel, Morrison and West Park, $2.00 to $3.00 per room.
Elton Court, Eleventh and Yamhill, $1.50 to $2.00 per room.
Imperial Hotel, Seventh and Washington, $1.50 to $3.00 per room.
Large Hotel, Sixth and Washington, $1.50 to $2.00 per room.
The Oregon, Seventh and Washington, $1.00 to $3.00 per per room.
The Oxford, Sixth and Oak, $1.00 to $2.00 per person.
The Perkins, Fifth and Washington, $1.50 to $3.00 per person.
The Scott, Seventh and Ankeny, $1.00 to $2.50 per person.
American Inn, Fair Grounds, European, $2.00 to $5.00 per day; American plan, $4.00 to $7.00 per day (includes admission to Fair grounds).
Belvedere, Fourth and Alder, $1.00 to $2.50
The Esmond, Front and Morrison, $1.00 to $2.00.
Grand Central, Third and Flanders, $1.00 to $2.00.
The Merchants, Third and Everett, $1.00 to $2.00.
St. Charles, First and Morrison, $1.00 to $2.00.
Hill Military Academy, Twenty-Fourth and Jarshall, American plan, $3.00 to $3.50.

The Portland Hotel Company has also a large number of rooms outside of the hotel, in private residences and boarding

houses, first class in every respect, where guests are cared for in the same manner as are those in the hotels, at a rate of $4.00 to $5.00 per room, two in a room.

The "Exposition Accommodation Bureau," "organized to protect Portland's guests," and under the control of the fair board, have some thousands of rooms in private residences, well selected, first class and comfortable, which they are renting for from $1.50 to $3.00 per room, for either one or two persons. Both the Portland Hotel Company and the "Exposition Accommodation Bureau" are filling the requests of the Committee of Arrangements for reservations on the above terms, thus insuring comfortable quarters at from $1.00 to $2.50 per day, according to rooms.

There are an abundance of restaurants where good meals may be obtained at from 25 cents up.

A bureau of information will be maintained at the Union Depot for the convenience of members on arrival.

The chairman of the committee on hotels is Mr. W. C. Bowers.

Five Thousand for Portland.

The *Medical Sentinel* (Portland, Ore.) says in its May issue: "On May 1 the total number of requests for hotel reservations made to the Committee on Arrangements for the coming meeting of the American Medical Association amounted to 954 rooms. Accommodations have been provided for these as they have been received. Nearly every other man one meets about town, physicians and laymen, tell of preparations for the care of some eastern physician already made. Probably not less than as many more are in this way already provided for. With approximately 2,000 visitors at the American Medical Association already provided with accommodations, two and a half months before the date of the meeting, it is now safe to say that the attendance in Portland will be the greatest in the history of the Association. That there will be not less than 5,000 in attendance seems now positive. The best thing about this is that Portland will be able to care for all who wish to come. Mr. Bowers, who is on the committee, has guaranteed accommodations for 5,000. With the outside help, which is doing its work unrequested and unannounced, in this regard, the committee will not itself be taxed to this amount. The last to request for rooms must, of course, expect to get what is left. Physicians should write for reservations immediately. For instance, Dr. Coffey will care for ten physicians and their families, and others in the profession in proportion to their ability and facilities so to do."

It is gratifying to feel the hearty, hospitable spirit that is shown here and in letters from the officials at Portland. Physicians should assist the committee on entertainment by having accommodations assigned in advance.

MEETING PLACES.

The Sections Will Meet in Unusual Proximity to One Another—Excellent Arrangements.

The meeting places for the various sections are all centrally located; within a few minutes' walk of one another, and of the hotels. The Armory of the Oregon National Guard, Tenth and Couch streets, will be the central point, where will be held the General Meetings and those of the Section on Practice of Medicine and of the Section on Surgery and Anatomy. Here also will be the registration headquarters, the postoffice, the pharmaceutical exhibit, information bureau, free telephone service (local and long distance), etc. The room for the General Meeting will seat 2,500 people. In this same room the Section on Surgery and Anatomy will meet. In the social hall of the same building will meet the Section on Practice of Medicine; this is a spacious room, with a seating capacity of 1,000. Immediately across the street is the Atkinson School building, where some fifteen spacious, well-lighted rooms with seating capacity of from 50 to 250 each have been placed at the disposal of the Committee of Arrangements. Here will be held the meetings of the sections on Obstetrics and Diseases of Women, Pathology and Physiology, Diseases of Children, Cutaneous Medicine and Surgery, Pharmacology, Hygiene and Sanitary Science, and Nervous and Mental Diseases. Here also will be the Scientific Exhibit.

The section on Ophthalmology and the section on Laryngology and Otology will meet in the Hirsch-Selling Building, Tenth and Washington streets, which is only four blocks from the Armory.

The House of Delegates will hold its sessions in the Chamber of Commerce Building, Third and Stark streets, nine blocks from the Armory.

It will thus be seen that the meeting places are compactly arranged. They will prove commodious and comfortable and are only a few minutes' walk from the hotels.

The chairman of the local committee on meeting places is Dr. E. F. Tucker.

REGISTRATION OF MEMBERS.

The registration of members at the annual session is always a simple matter to those who understand what is required.

In the first place, before presenting himself at one of the windows, it is necessary for the physician to fill out a registration card to be found on the tables.

Those registering come under one of three classes: 1, those who have already paid the annual dues for the current year; 2, those who have not paid the dues, and 3, those who join the Association at the session.

1. Those who have paid for the current year have been supplied with a small pocket card, which is also a pocket certificate, to take to the session. This, with the registration card, duly filled out, should be presented at the window, and the badge, program, etc., will be given him at once.

2. Those who have not paid their dues will present the registration cards with the annual dues at a window labeled "cash," and will receive receipts and their badges, programs, etc. (Those who are behind in their dues must pay the back dues as well as those for the current year.)

3. Anyone desiring to join the Association must have a certificate showing that he is a member in good standing of an affiliated association in the state in which he resides. This certificate must be presented with the registration card at the window marked "new members" before the dues are paid at a "cash" window.

COMPLIMENTARY ENTERTAINMENTS.

The Committee on Entertainment has under consideration several special excursions that will enable our visitors to see the most interesting natural scenery accessible within a day's ride of Portland. (In this connection, see the references to Western scenery on preceding pages.)

These excursions will include trolley rides to the most commanding viewpoints on the heights back of Portland (see illustration); a steamboat excursion through the great Columbia River gorge (see illustration); a trip by rail to the ocean, and an evening on the Exposition grounds with special features; these will be free to our guests.

For the excursion on the Columbia River two or three very fine steamers are at the disposal of the committee, each with a carrying capacity of about 500, and in case a greater number wish to go they will be able to secure others. The plan contemplated at present is to go down the Willamette and then up the Columbia to a certain point, and to have a fine luncheon served, and then to return by boat or perhaps by rail. This trip will be a splendid feature of the entertainment.

A special committee will be in charge of the entertainment of the wives and families of visiting members.

THE ALASKA TRIP.

Excursion to Alaska by Steamer After the Session Closes.

There will be a special excursion to Alaska, July 18. This trip is said to be without equal anywhere. It is not an ocean trip in the usual sense, with its many unpleasant accompaniments of seasickness and stormy weather, but rather like a river ride, amid a thousand islands and underneath beetling cliffs and snowcapped mountains, with just an occasional dash

of old ocean as the vessel crosses some wider strait. (See illustrations on previous pages.)

Without specifying in particular the various ports of call on the trip, it can be said that all the points of interest on the Alaska route will be touched at between Seattle and Sitka. All applicants for reservations for the trip will be supplied with literature by the steamship company. A round-trip rate of $60 from Seattle has been obtained, and the steamer *Jefferson*, a splendid vessel designed and built especially for this route, will be used. She has spacious social halls and decks, and every modern convenience to make the voyager comfortable. The cuisine is equal to that of the best first-class hotels. The *Jefferson* will leave Seattle at 9 a. m. July 18, and returning, will discharge at Tacoma July 29, thus consuming eleven days in the trip. She will touch at Vancouver on the return trip, and if any of the excursionists desire to visit Victoria they will be given tickets from Vancouver by way of Victoria to Seattle on the company's regular steamers. All intending to make this excursion are requested to send in their applications at once to the Committee of Arrangements, as the number already applying suggests the possibility that they may have to engage a second steamer.

The following quotation from the steamship company's "A Trip to Wonderful Alaska" may be of use in the selection of clothing for the trip: "Making preparations for a tour of southeastern Alaska does not mean that one must provide himself with thick-soled shoes and fur robes. Pack your trunk with summer clothing, wear a Panama hat, and with a light overcoat as a protection in the cool evenings, you are ready to depart on the voyage north."

It might be well to modify this quotation to read "moderately heavy clothing as well as overcoat," and for "Panama hat" read "felt hat" or "traveling cap," though the quotation is given on the authority indicated, and may hold good as a general statement.

HONOLULU AND YOKOHAMA.

Trips to the Hawaiian Islands and to the Orient.

A trip to Honolulu may be arranged. The Pacific Mail Steamship Company will carry fifty excursionists to Honolulu at a round-trip rate of $110 each. The fine steamer *Korea*, said to be equal in all respects to the finest transatlantic steamers, will leave San Francisco July 22, a convenient day for sailing. In view of transpacific travel which must be accommodated, the company limits the number in this party to fifty.

On this same steamer the round-trip rate to Yokohama will be $240; Hong Kong, $270, provided a party of not less than twenty make that trip. Those who are contemplating these trips should write at once to Dr. K. A. J. Mackenzie, chairman of the Committee of Arrangements, Portland, Oregon.

OTHER MEETINGS AT PORTLAND.

Davis Memorial—State Medical Journals' Association—College Alumni.

Announcements are received of the following meetings to be held at Portland in connection with the session of the American Medical Association:

Memorial Meeting to the Late Dr. N. S. Davis.

The American Medical Association and the Society for the Study of Inebriety and Alcohol will hold a memorial service at Portland in commemoration of the life and work of the late Dr. N. S. Davis of Chicago. Dr. Davis will be remembered as one of the founders and most active promoters, as well as president of the American Medical Association, and one of the widest known and most distinguished physicians of this country. He was founder and president for fourteen years of the American Medical Temperance Association. His numerous friends and contemporaries from both societies will unite on this occasion to commemorate his great services to both medicine and science.

This meeting will be held at Portland, Ore., Wednesday evening, July 12, at one of the general meetings of the American Medical Association and will follow the address on "Public Health" in the same hall and place.

The memorial address will be delivered by Dr. Henry O. Marcy, Boston, ex-president of the American Medical Association. Other addresses will be delivered by Drs. J. H. Musser, Philadelphia, and L. S. McMurtry, Louisville, Ky., president and president-elect of the Association, and by Dr. G. W. Webster, Chicago, president of the Illinois State Board of Health; Dr. Winfield S. Hall of Northwestern University, Chicago; Dr. T. D. Crothers, Hartford, Conn.; Dr. John Hollister, Chicago, and Dr. Henry Didama, Syracuse, N. Y. Others will contribute memorial notes of the work and personal influence of Dr. Davis in science and in American medicine.

American Association of State Medical Journals.

The American Association of State Medical Journals will hold its second annual meeting in the parlor of Hotel Portland, Portland, Ore., Tuesday afternoon, July 11, at 4 o'clock.

Papers on medical advertising will be read by Drs. George H. Simmons, Secretary of the American Medical Association; Philip Mills Jones, secretary-editor, California State Medical Association, and E. Eliot Harris, chairman of the committee on legislation, New York State Medical Association; and on "The Function of the State Medical Association Journal," by Dr. James B. Bullitt, secretary-editor, Kentucky State Medical Association. "The Possibilities from a Business Standpoint of Concerted Action on the Part of State Medical Journals" will be a subject for general discussion by all those interested.

PHILIP MILLS JONES, President, San Francisco.
JAMES B. BULLITT, Secretary, Louisville, Ky.

University of Pennsylvania Pacific Northwest Alumni.

The annual reunion of the Pacific Northwest Alumni Association of the University of Pennsylvania will be held at the University Club, Portland, Ore., Saturday evening, July 15, 1905.

All members of the association are earnestly requested to be present, and all visiting University of Pennsylvania graduates who expect to be in Portland at that time are most cordially invited to meet with us.

CHARLES E. MCCLURE, Secretary, Seattle, Wash.

Insurance Examiners—American Urological—American Surgical—Medical Editors.

The American Urological Association will meet in Portland July 12 and 13.

The annual meeting of the American Association of Life Insurance Examining Surgeons will be held in Portland July 10. A program of unusual interest is announced.

The American Surgical Association will meet in San Francisco July 5 to 7. Many are going up the coast to Portland at the close of the meeting.

The American Medical Editors' Association will meet in Portland July 10.

THE SUBCOMMITTEES.

The chairmen of the Portland subcommittees of arrangements (which latter was mentioned on page 1762) are as follows:

COMMITTEE ON FINANCE: Dr. H. W. Coe.
COMMITTEE ON MEETING PLACES: Dr. E. F. Tucker.
COMMITTEE ON HOTELS: Dr. Wm. Jones.
COMMITTEE ON ENTERTAINMENTS: Dr. A. C. Smith.
COMMITTEE ON REGISTRATION: Dr. R. G. Coffey.
COMMITTEE ON GENERAL EXHIBITS: Dr. H. W. Coe.
COMMITTEE ON TRANSPORTATION: Dr. W. T. Williamson.
COMMITTEE ON BADGES: Dr. J. F. Dickson.
COMMITTEE ON PROGRAMS, PRINTING, ETC.: Dr. S. E. Josephi.
COMMITTEE ON BANQUETS: Dr. C. H. Wheeler.
BUREAU OF INFORMATION: Dr. J. F. Bell.
LADIES' COMMITTEE: Mrs. Helen Ladd Corbett.

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SATURDAY, JUNE 3, 1905.

FOOD FOR THOUGHT.

For several weeks the Committee on Chemistry of the Council of Pharmacy and Chemistry, with the assistance and co-operation of other chemists, has been carefully investigating and analyzing a number of proprietary articles on the market, with the object (1) of determining as nearly as possible their composition, and (2) of acquainting the medical profession of the United States with the true character of some of the medicines offered them and for which claims of great therapeutic value are made. The council publishes in the department of Pharmacology in this issue the results regarding a few of the preparations investigated. We hope that our readers will carefully study the report and at the same time will try to appreciate all it means. To realize its full import, however, one should bear in mind the claims made by the manufacturers for these preparations in regard to both their composition and their properties as remedial agents. Most of these preparations have been analyzed by several members of the committee, but to leave no room for doubt as to the facts stated, the services of expert and trustworthy chemists, not members of the council, have also been utilized.

As will be noticed, the statements made in the report are extremely conservative. For instance, the minimum amount of acetanilid found by any chemist is the amount reported. This, in part, will explain why in no instance is the total percentage 100. In cases of tablets, the amount of starch or other excipients used in forming the tablets is not incorporated in the report. Thus the analyses show that these preparations are mixtures of acetanilid, with one or more of the following: sodium bicarbonate, sodium salicylate, ammonium carbonate, caffein and citric acid.

It will be noticed that included in this report are four so-called "proprietary" preparations and two so-called "patent medicines." Medicines bearing trade names, placed on the market for physicians' use, are usually referred to as "proprietary medicines," whereas those that are offered directly to the public are called "patent medicines." We have more than once asserted that there is no difference between a certain class of "proprietaries" and "patent medicines." The report here presented, we believe, illustrates the truth of this assertion.

The report is presented to the members of the medical profession of the United States for their thoughtful consideration.

THE ATOMIC THEORY.

Through the study of radioactive substances and the closely allied phenomena exhibited by x-rays, cathode rays, etc., observations have been made that have led to considerable modifications of the views that have long been held concerning the ultimate composition of matter. So recent are these discoveries that many of the conclusions are hardly beyond the speculative stage; but it may be said that the past two years have given exceptionally great progress in the study of this most fundamental problem. For years the atomic theory has held its ground as affording a working hypothesis, for it expressed the limits of human knowledge in this direction. The atoms of chemistry had never been known to divide, each element had remained true to itself and had resisted all attempts to transform it into any other element, and all the observed phenomena of chemistry were compatible with this theory; indeed, so well does the theory hold that with it as a basis it has been possible to predict many new facts in advance of their discovery. Despite all this evidence it has been well understood that the atomic theory was, after all, only a theory, which at any time might be disproved, and we now seem to have accomplished many of the steps necessary for its dethronement. Evidence is at hand that the atom is not, as its name implies, incapable of division, and the immutability of elements is questioned on good grounds. Although these topics are at the present time under the most active discussion, and, therefore, far from settled, yet a review of the essential features, avoiding the difficulties of technical terminology, may not be untimely, it being understood that no statements are or can be made dogmatically.

In considering this problem of the constitution of matter, one must go back of the ordinary substances of the laboratory, to the ether of the physicists. This ether, which Faraday and other scientists of his time imagined as an absolutely homogeneous, structureless substance, filling all space, is now regarded as consisting of separate particles; these particles may be in immediate contact with each other, however, thus producing much the same effects as if the ether were absolutely continuous. The existence of ether, which has long been a mere hypothesis, is now regarded as proved by many. Even determinations of its weight have been made with some approach to accuracy, although to one unaccustomed to the quantities used in the estimates of physicists, astronomers, and mathematicians, it probably will not convey a very adequate conception of the extreme lightness of ether to say that its weight is to the weight of water as one is to ten raised to the seventeenth power (10^{17}). It is believed that in this great, all-pervading ether mass, not all parts are the same—the particles are all in motion, and in certain places through the revolution of the particles it is thought that vortices are formed. These vortices of rapidly moving particles acquire an electrical charge

and assume a certain degree of permanence, constituting what are termed electrons. This is the ground of the modern "electron theory." The electrons are considered to be the smallest existing particles that possess electrical energy and mass. They exist free and in rapid motion in the cathode rays, and their size has been estimated at one two-thousandth part (1/2000) of that of the hydrogen atoms. Here we have fairly proved the existence of particles much smaller than any of the atoms of chemistry, and in the case of radium we find such particles constantly being given off from a definite chemical substance, constituting what are termed the *B*-rays. According to the electron theory, the "atoms" are made up of accumulations of electrons of different electrical charges.

Not only has the indivisibility of the atom thus been brought into doubt, but also the conception of the unchangeable nature of the elements, which has become almost popular knowledge through the unavailing attempts of alchemists, ancient and modern. Here, again, the radioactive substances have been the source of information. In 1895, Sir William Ramsay discovered the element helium in terrestrial substances for the first time; namely, in minerals which contained radioactive elements (radium, thorium, uranium). Helium is a gas belonging to the same group as argon, all the members of which are characterized by a high degree of chemical inertness, so that as yet they have never been found in chemical combination with other elements. The suggestive association of helium with these radioactive elements led to further studies by Ramsay and Soddy, which resulted in the remarkable discovery that helium is formed spontaneously from radium—it was even possible to collect and to isolate the helium so produced. Helium, an element, appears to be formed through the spontaneous disintegration of radium, another element; in other words, one element may be formed from another, and another essential proposition of the atomic theory is contradicted, at least in part.

The conclusions that can be reached from these observations and deductions may be stated as follows: The smallest particles of matter seem to be the ether particles, which aggregate into electrically charged, rapidly moving masses, the electrons. These, in turn, unite in some systematic manner to form the "atoms" of the "elements." Most of the atoms now existing are very stable, and resist all known methods of separation into their electrons, but there exist a few that are unstable and hence spontaneously break down into more stable forms (e. g., radium into helium), with the production of the phenomena of radioactivity. Radioactivity, therefore, may be looked on as evidence of the spontaneous decomposition of chemical atoms. At the time of the massing of the electrons into the atoms, an enormous potential energy was stored up; for example, it is estimated that by the decomposition of one gram of radium into its electrons, enough energy is liberated to lift 424 tons to a height of one kilometer. After all is said, however, we must admit that the net result is merely the substitution of one theory by another—instead of an atomic theory we have an electron theory, and we have pushed the size of the fundamental constituents of our world, as we know them, down another fraction. A theory is of value when from it new facts can be predicted and so their discovery hastened, and in this way the establishment of the electron theory may become of enormous importance. The atomic theory is not by any means displaced by the electron theory, for its value as a working hypothesis in chemical deductions still remains—at the very least the atom stands as the unit of most chemical changes, and as such is of the greatest importance.

PREPARE FOR THE FOURTH OF JULY.

In 1903, the Fourth of July tribute was 466 dead and 3,983 injured; in 1904, it was 183 dead and 3,986 injured. The first year the reported cases of tetanus numbered 415, while last year there were but 105. Within one year the deaths from tetanus were reduced by 75 per cent., although the deaths from other causes were increased by over 50 per cent., and the total number of recorded injuries was practically unchanged. Our analysis of the epidemics of previous years made it evident that the chief reason for the great tetanus mortality lay in a lack of appreciation of the danger that lies in every blank cartridge wound and the need for vigorous and skilled treatment immediately after its reception. Just before the last Fourth of July a vigorous "campaign of education" on this point was carried on throughout the country, by both the medical and the lay press, and to this cause alone can be attributed the great reduction in tetanus mortality. The average parent learned that a blank cartridge wound was a serious injury that needed surgical attention; the average physician learned that simple dressing of such wounds was little better than nothing at all, and that thorough surgical cleansing with prophylactic injections of tetanus antitoxin were required. The city father and the small boy seem to have profited somewhat also, because, for one reason and another, the number of wounds from blank cartridges fell nearly one-third in the reports, although the less tetanus-dangerous wounds from fire crackers, cannons, display fireworks and bullets all increased markedly. Hence, tetanus mortality fell while the deaths from other causes were more numerous than before.

We are now facing another celebration of Independence Day, and wondering what it will bring forth. Shall we profit by the gain of last year, or, lulled by this success, shall we relapse into the old condition? As certain as the Fourth itself, is the aftermath of death and suffering. We know that it is coming, we know how it is to be prevented, and it only remains to act on

the knowledge we possess. The part that the medical profession has played and can play in this matter of public hygiene is most important; it is twofold, internal and external. The internal action within the profession consists in the development of a universal appreciation of the danger and prophylaxis of tetanus after Fourth of July injuries. As shown by the statistics of last year by far the most important factor in reducing the tetanus mortality by over 300, was the improved treatment of tetanus wounds throughout the country, due to active and intelligent action by both parents and physicians. We have every reason to believe that the profession is now generally aware of the necessities of the situation, and is prepared to take proper measures in all cases. The public, however, needs continual stirring up to remind it of past events and of future dangers. Here lies the important work for the physician outside of the direct care of the injured. Last year a large part of the success of the campaign was due to the public-spirited efforts of medical men. In many cities and towns the local medical societies urged on public authorities the necessity for enforcement of laws regulating the sale and use of dangerous explosives. Frequently this action led to very decisive results, and at the least it brought the matter before the press and the public. The daily papers have been eager advocates of reform in Fourth of July celebrations, and their utterances gain weight in public opinion when based on the action and advice of reputable medical authorities.

Another important aid in securing popular co-operation is the publication of reliable facts and figures, which in many instances may be properly furnished the press by the profession. Inspired by the frequency of eye injuries on the Fourth, the chairman of the Section on Ophthalmology devoted his address at the last annual session of the Association[1] to this subject and made many valuable suggestions as to means available to physicians in inspiring ordinances against the use and sale of dangerous fireworks, and especially in the difficult task of steering them through the rocks and shoals of municipal legislation. The campaign must be aimed in two directions—one, the stimulation of inert and inefficient civic and police authorities; the other, the education of public sentiment which is essential to the observance and enforcement of the laws. The improvement of last year should encourage further action—the record of 183 dead and 3,986 wounded shows that it is still sadly needed.

We shall take pains again this year to gather reliable statistics and hope that we may have the co-operation of our readers in so doing.

1. Thoughts Suggested by a Study of the Eye Injuries of Independence Day. Robert L. Randolph, M.D., THE JOURNAL A. M. A., Dec. 10, 1904.

TENEMENTS.

The State Board of Tenement House Supervision of New Jersey has reason to be proud of the record it has made during the first twelve months of its existence. During this time it has assumed control of the tenement houses, old and new, throughout the state and the inspection of all plans for proposed tenement houses, the latter being defined as a single building housing more than two families. According to the report of the secretary,[1] more than three thousand notices of violation of the law have been served on landlords, all of which have been obeyed. Plans for buildings representing over three and a half millions' expenditure have been approved, and 25 per cent. of all plans examined rejected. All this has been accomplished with only one resort to the courts, the serving of a peremptory order with a notice of the penalty following non-compliance having been sufficient in all the other cases. Incidentally, the board has been a valuable aid to health officials in small communities, hampered in their efforts by the fear of offending local politicians.

The most valuable part of this report to the public outside of New Jersey is the statement made in regard to the conditions found to exist in small cities and rural communities in that state. When the law which created this board was framed, objection was made to the extension of its authority over small towns and boroughs, where, it was argued, conditions did not require such supervision. The board has discovered, however, that bad housing conditions are not confined to the large or even to the second-class cities, but are surprisingly numerous in places where land is abundant and cheap and where the only excuse for overcrowding is the greed of the landlord and the ignorance and low standards of the foreign immigrant.

Tenements designed for from six to ten families were found in process of construction in small towns or at the edge of cities where there was no proper sewer or water supply, the landlord striving to reproduce in a region of ample space the conditions to be found in the old and crowded quarters of our city slums. In other instances, old residence houses were being remodeled to make them accommodate several families, with utter disregard of such factors as light, air and privacy. Mr. Allen states that "privy vaults filled to overflowing, cellars and outhouses reeking with filth, sleeping rooms unlighted and unventilated, all are to be found in sections of the state where land is cheap and where there would seem to be no excuse for the people living in herds." Attractive, prosperous little cities like Plainfield, the Oranges and Montclair were found to contain such "slum" conditions.

What is true of New Jersey is certainly true of many other states. The housing problems of our great cities are so enormous, the conditions there so spectacular, that they tend to blind us to the evils, slighter in extent, but identical in character, which are to be found in small cities and even in villages where large factories have been built. We venture to predict that

1. "Housing in the Smaller Municipalities," Charles J. Allen, Charities, May 6, 1905.

there are few small cities or towns which will not be found to contain their own "slum" districts if careful search be made; and these slums are a serious menace to the health and morals of any community. No evil is more insidious in its onset than the insanitary, overcrowded tenement, none more easy to prevent, none more difficult and expensive to eradicate after it has gained a firm hold. New Jersey is to be congratulated on the vigorous opening of her campaign for improved housing conditions.

ISTHMIAN SANITATION AND THE PRESENT STATUS OF THE SANITARY DEPARTMENT.

Interest in sanitary affairs at the isthmus is just now centered in two special features, namely, the state of health in the canal zone and in the cities of Panama and Colon and the status of the sanitary department under the new canal commission.

With reference to the general health within the canal zone it is gratifying to be able to state that advices as late as May 10 were to the effect that with 11,000 men on the rolls, there were only 199 on the sick list; later advices do not change these figures, which are certainly favorable. This fact should be generally heralded if for no other reason than that its widespread dissemination would tend to increase the confidence in the efficient sanitary administration and to dissipate the deep-seated dread of the climate which, judging from experience under the American occupation, has been much maligned. At the same time it is important to remember that both yellow fever and malaria continue to stand as menaces to the successful prosecution of the great work. With reference to yellow fever no fresh case occurred from March 23 to April 17 and the hope was entertained that it had been stamped out. It must be said, however, that it was a rash hope in view of the fact that the water works with supplementary drainage for Panama are not yet completed and that both that city and Colon are compelled even yet to rely on water from wells distributed by peddlers and stored in the ever-mischievous water barrels. That the hope was in fact delusive was shown by the additional fact that about April 17 a large administration building, in which some 300 nonimmunes were housed, became the scene of an outbreak which yielded 15 cases of yellow fever, 4 of which had died up to May 10. The last case, we are advised, occurred May 21 and is doing well. The premises were, however, speedily and thoroughly fumigated and it is thought that that particular outbreak is at an end.

But more serious is the fact that there has been a sporadic development of yellow fever at Colon, which until recently has been considered free from the infection. This is serious, not from the extent of the disease which, we believe, has so far been limited to a very few cases, but from the fact that, unlike Panama, there is no prospect for the immediate installation of a proper water supply and, consequently, no immediate prospect for the abolition of the water barrels, and the consequent propagation of the stegomyia. Until a reliable water supply derived probably from the upper Chagras, supplemented with drainage, can be installed, effective sanitation of Colon can not be expected. This promises to require at best a period of eighteen months or two years. In the meantime the sanitary department can be relied on to fight this disease, as it is constantly fighting the more widely diffused malaria, with every instrumentality at its disposal and with the probable result that anything like an epidemic manifestation of yellow fever will be averted.

But what instrumentalities has the sanitary department at its disposal? This brings up the question of the status of that department under the new commission. In this connection, the New York *Sun*, while praising the President for his promptness in changing the commission and while praising the personnel of the new commission, calls attention to the fact that Judge Magoon is designated by executive order as "commissioner in charge of government and sanitation" as an evidence that the sanitary department is still technically subordinated to lay dictatorship. It is possibly true that the President's orders are susceptible of this construction and that the "commissioner in charge of government and sanitation" has, if he chooses, the last word to say on sanitary questions. But it is known that Secretary Taft took early opportunity, after the appointment of the new commission, to make it clear that the supervising discretion of the commission, so far as sanitary matters were concerned, would be limited in practice, chiefly and essentially to a just and equable apportionment of such funds as Congress may, from time to time, make available for the general purposes of the enterprise. Any less reservation of power by the commission would certainly be incompatible with good government. In the meantime it is satisfactory to relate that Governor Magoon, almost as the first act of his administration, manifested his interest in sanitary matters by approving in their entirety the requisitions of Colonel Gorgas for the next six months to the amount of nearly $700,000, and by increasing the salary not only of Colonel Gorgas, but of practically the entire personnel of the sanitary department, the details of which were published in THE JOURNAL three weeks ago. The cumbersome and inefficient purchasing machinery set up by the old commission has been abolished and purchases are now made by the purchasing department of the Army as they ought to have been made from the start. Major Kean of the Surgeon-General's office is now on the isthmus to confer with Colonel Gorgas relative to still greater expedition in the matter of making and forwarding supplies; although since March materials for the sanitary department have been arriving as rapidly as existing transportation facilities will permit. The maintenance of transports for isthmian service is simply a vital necessity. The sanitary department has been given charge of

its own property and of its own construction—two privileges that were heretofore denied. These privileges were, indeed, practically all that Colonel Gorgas had asked for from the beginning; other points are considered of comparatively small importance. Reports from the isthmus are to the effect that Colonel Gorgas, pursuant to Secretary Taft's orders, has been serving *ad interim* as governor of the canal zone, pending the arrival there of Governor Magoon—a merited expression of confidence on the part of the Secretary. Further reports are to the effect that the orders of the sanitary department are being more generally obeyed than formerly in Panama and Colon, where, after all, the great sanitary engagement is being fought. Taken all in all the status of the sanitary department has been vastly improved; and the results of its labors are, in consequence, already improved. It is a pleasure to be able to sustain Secretary Taft in the wise course he has taken in the matter.

THE PORTLAND SESSION.

Much space is taken up in this issue with a description of Portland as the next place of meeting of the American Medical Association, the routes to and from Portland, the section programs and other matter of information and interest regarding the coming session. While the place of meeting is in the extreme west, and a long distance from the center of population, there is every promise of a large attendance. At this opportune time of year, most of those who go will make the trip their summer vacation, and will take the opportunity to see and know what the "Great West" contains. An unusually large number of special parties have been arranged, some to make the round trip, others to travel together one way only. The itinerary has been studied out so that the most for the money and the time can be obtained. The great West is full of natural wonders and grand scenery, and to make the best use of the opportunity it is necessary that, before starting, one should study out the various routes in detail, aided by maps and railroad circulars. There is so much to be seen that one is liable to go very near to some attractive point that could have been seen easily and not know it till it is too late. The attraction of the scientific work of the session is not to be ignored. A reference to the preliminary program will show that the various sections offer a sufficient variety of scientific topics to attract every specialist as well as the general practitioners of the country and the city doctor. All will be welcome.

CHARLATANS NOT ALL MEDICAL.

The *Spectator*, an insurance journal, in its issue of May 18, 1905, comments editorially on personal damage suits in a manner interesting to medical men. As a text, it reprints from a New York newspaper this advertisement: "Successful lawyer takes accident and other cases absolutely free unless successful; large settlements quickly obtained; advice free." The wording might almost be copied from the glittering promises of the medical quack. Calling these renegade lawyers "shysters" and "ambulance chasers," the *Spectator* recounts the circumstances of an utterly unjust suit for personal injuries instigated by one of them under conditions perfectly familiar to physicians, and makes the unqualified statement that hundreds of these claims would never be made but for "the intervention of meddlesome lawyers." No one charges the legal profession as a whole with these sins, but we echo the plea of our contemporary that the bar associations should at once make serious efforts to purge their profession of this crying abuse. Physicians, as well as employers and corporations, have suffered much from this species of blackmail; and, while we have our own sins to answer for, we hope to be pardoned for suggesting to the lawyers that an organized effort on their part to expel the shysters would meet with widespread approval. The medical profession through its effective organization has shown the way through which the slow but certain force of permanent reform may work toward greatly improved conditions.

THE DISSEMINATION OF MAMMARY CARCINOMA.

There is probably no subject of such great interest from both the academic and the practical standpoints as the dissemination of malignant neoplasms. Notwithstanding the enormous amount of pathologic work which has been lavished on the subject in the last few years, we can still say, with Handley,[1] "the subject of cancerous dissemination is in a somewhat hazy and indeterminate condition." In the case of mammary carcinoma, the commonest form met with in general practice, the question of metastases is of great importance, particularly from the surgical point of view. The frequency with which this form of growth gives rise to secondary nodules in the skin, the bones, and the internal organs has long been known, but the route of infection of the bones and internal organs has been a much-disputed question. It is probably true that the generally accepted theory has been that the infection of the axillary lymph glands is due to lymphatic infection and emboli of tumor cells. It has also been generally held that regional nodules in the skin, fascia, or muscle were due to lymphatic infection either by direct extension or by embolism. The point most in question is the route by which metastases in the bones and internal organs are carried. Most writers have held that the carcinoma cells are transported to these situations by the blood stream. Handley is entirely opposed to blood transmission, and his recent Hunterian Lectures are largely taken up with a consideration of the facts opposing it and in favor of lymph transmission. The methods of transmission are divided, according to this author, into external or parietal dissemination and internal or visceral dissemination. Handley claims that however distant skin foci are from the original growth they are still transmitted by the lymphatics. According to this conception of carcinoma metastases, the process is one of direct extension through the lymph vessels: in fact, by serial sections of long strips of skin and subcutaneous tissue, Handley claims to have traced a continuity between the primary and secondary growths.

1. Hunterian Lectures, Lancet, April 8, 15 and 22, 1905. Abstracted in THE JOURNAL, May 20, 1904, p. 1644.

The lymph channels mainly involved are the medium-sized ones running on the deep fascia, the skin, bones, and serous cavities being secondarily infected from these. If such a conception is correct, and it is certainly based on careful observation, it means that we must modify our present surgical procedures and pay more attention to the removal of the deep fascia and less to the removal of skin. Handley even suggests removing the fascia down to the epigastric region, as he claims that since the modern operations for breast cancer, while infection of the pleura has become less, the same is not true of infection of the peritoneum through the epigastric region.

THE COMPARATIVE VALUE OF HORSES IN THE PRODUCTION OF DIPHTHERIA ANTITOXIN.

As might have been expected, it has been found that horses do not all react alike in response to inoculations with diphtheria-toxin for the purpose of producing antitoxin, and no method is yet known by which high-test horses can be selected without being submitted to the tedious process of immunization. It has been shown that every horse has a maximum antitoxic limit, which can not be increased no matter how much toxin is employed. As the outcome of a study of the records of 100 horses immunized to diphtheria-toxin, Dr. William R. Hubbert[1] found that in order to obtain the best results in the production of diphtheria-antitoxin, young animals are usually to be preferred. More than one half the number of such horses can be made to yield 300-unit serum, while one-third will yield 500-unit serum. High-test horses require a shorter time for immunization and will yield a potent serum for a longer period than will low-test horses. The maximum antitoxin value is attained within from two to ten months from the beginning of treatment, the average being about four months. Serum of marketable value may be obtained for a few months longer, about five months on the average, when the decline begins, usually never to rise again. If the serum of a new horse does not test 300 units by the end of the fourth month after treatment has been begun, it may be regarded as nearly certain that the animal is not suitable for the purpose in view. A horse is usually at his best during the fourth month of immunization. Horses attaining a high antitoxic strength exhibit a longer period of usefulness than do lower-testing horses, but usually at the expense of a much lower unit value. A horse that has attained a maximum antitoxic height begins to suffer a decline in antitoxin, which is usually as rapid as was the ascent, and it is unaffected by subsequent injections of diphtheria-toxin.

Medical News

ARKANSAS.

Dr. Taylor Left Large Estate.—The estate of the late Dr. Charles M. Taylor, Little Rock, is valued at half a million dollars.

To Annul Certificates of Drink and Drug Habitues.—A bill has been passed by the House of Representatives providing for the cancellation of the certificates of all physicians who are habitual drunkards or users of cocain.

Unregistered Physician Fined.—Dr. Thomas B. Rider, Hot Springs, charged with violating the laws laid down by the secretary of the interior for the government of the United States Reservation in that he, not being a registered physician, had prescribed baths for one of his patients, was fined $25, May 20, and took an appeal to the higher court.

Personal.—The Pine Bluff Board of Health has organized with Dr. Henry E. Williams, president, and Dr. W. H. Blankenship, secretary.——Dr. Foster G. Richardson, Conway, has been elected assistant physician at the state penitentiary and has been assigned to duty at the state farm.——Dr. John B. Bond, Little Rock, who was recently operated on for appendicitis, is making favorable progress toward recovery.

CALIFORNIA.

Uxoricide Found Guilty.—Dr. Frederick N. Staples, Amador City, who killed his wife by poison and ran away to Mexico with another woman, was found guilty of murder in the first degree May 15 and will be sentenced to deat

Branch Society Organized.—The Eye, Ear, Nose and Throat Section of the Los Angeles County Medical Society was organized May 10, with a charter membership of 24. Its officers are William D. Babcock, chairman, and F. W. Miller, clerk.

Acquitted.—Dr. Otto C. Joslen, known also as Dr. White, San Francisco, has been acquitted. He was charged with having caused the death of a woman by an illegal operation.——Dr. B. C. Neff, Bakersfield, charged with practicing medicine without a license, was acquitted April 28.

Oppose Contract Doctors.—The Sonoma County Medical Society, at its meeting in Sebastopol May 11, adopted the following resolution:

Resolved, That we, the members of the Sonoma County Medical Society, pledge ourselves not to meet in consultation any doctor who violates Section 1 of amendments to our by-laws, relating to contract work; or any physician who does professionally officiate with such doctors; and that the secretary be instructed to send the names of doctors doing contract work, with a copy of this resolution, to every member of this society.

Antispitting.—The health officer of San Francisco has had posted in all public buildings the following notice regarding expectoration:

SPITTING SPREADS DISEASE.

It is, therefore, prohibited on sidewalks and on the floors of public conveyances, public halls, lobbies of theaters, office buildings, etc.

Violators are liable to arrest and fine under an ordinance of the Board of Supervisors of the city and county of San Francisco.

This order will be enforced by the Department of Health and the Department of Police.

By order of the Board of Health.

D. F. RAGAN, M.D., Health Officer.

April Mortality.—Reports for April, representing a population of 968,750, show a mortality of 1,265, or an annual rate of 15.67 per 1,000. In the public institutions, with a population of 9,401, there were 40 deaths, annual rate of 51.06 per 1,000. Among the causes of death were: Tuberculosis, 206; heart disease, 163; pneumonia, 94; cancer, 86; bronchitis, 20; diarrhea and dysentery, 20; typhoid fever, 16; alcoholism, 13; diphtheria, 12; cerebrospinal fever, 10; cholera infantum, 5; whooping cough, 4; influenza, 4; erysipelas, 2; typhomalarial fever, 2.

Found Guilty.—Dr. L. H. Meadows, San Francisco, alias "Dr. R. H. Westen" and "the old reliable Dr. West," on May 12, was found guilty of using the mails for improper purposes, was released on bail of $3,000, and ordered to appear for sentence May 23.——"Prof." Joseph Fandrey, "rupture specialist," of Los Angeles, charged with practicing medicine without a license, was found guilty May 12 and fined $250. This is his second conviction for a similar offense.——Dr. D. E. Lee, San Francisco, alias "Dr. R. Brooks Stirling," San Francisco, was convicted, May 15, of sending prohibited matter through the mails.

Graduations.—The University of California Medical Department (Toland Medical College), San Francisco, graduated a class of 17, May 17.——On May 18 the College of Physicians and Surgeons of San Francisco held its commencement exercises and graduated a class of 19. Hon. H. M. Delmar delivered an address on "The Dignity, the Responsibility and the Duty of the Medical Profession." Dr. Winslow Anderson, president of the college, conferred the degrees, and Prof. H. D'Arcy Power delivered an address on "The Relation of the Public to the Medical Profession."——Cooper Medical College, at its annual commencement exercises, graduated a class of

1. Jour. of Exp. Med., vol. vii, No. 2, p. 176.

37. Addresses were delivered by Prof. C. N. Ellinwood and Edward R. Taylor.

Personal.—Dr. Thomas M. Hayden has been elected health officer of Fresno.——Dr. James E. Taylor, Weaverville, has been appointed physician of Trinity County, vice Dr. David B. Fields.——Dr. Elizabeth Gallimore, San Jose, was thrown from her carriage in a runaway accident, May 7, and seriously injured.——Dr. Edward B. Robinson, San Francisco, has gone to Bristol Bay, Alaska.——Dr. John D. Meng has been reappointed health officer of Chico.——The health board of Oakland has organized with Dr. Frank L. Adams as president and Dr. Edward N. Ewer, health officer. Drs. Edward R. Sill and T. A. Williams are the other new members of the board.—— **Dr. J. Myler Crenshaw, Redlands, has succeeded** Dr. Cooper as health officer of San Bernardino.——Dr. Albert Soiland, Los Angeles, has gone abroad for four months.

COLORADO.

Correction.—Dr. Thomas H. Hawkins, Denver, requests that the item regarding him in THE JOURNAL of March 11 be corrected. He still holds the position of president of the medical staff of St. Anthony's Hospital.

Medico-Military Appointments.—Surgeon-General Matt. H. Root, Denver, has appointed Dr. T. Edward Carmody, major and surgeon, and Dr. Harry P. Packard, captain and assistant surgeon, N. G. Colo., both of Denver.

Judgment for Leaving Sponge.—In the case of Mrs. Mary E. Flamboe, Boulder, against Dr. Charles S. Elder, Denver, in which she claimed that a sponge was not removed after an operation and sued for damages of $10,000, the jury on May 21 returned a verdict for the plaintiff for $400.

Go Forth to Heal.—Chancellor H. A. Buchtel of the University of Denver conferred degrees on a class of 31 graduates from the Denver and Gross College of Medicine, May 18. The address of the evening was made by Hon. Robert W. Bonynge, and Dr. Leonard Freeman delivered the faculty address.

Personal.—Dr. Lewis E. Lemen, Denver, has been appointed a member of the State Board of Health, vice Dr. Hubert Work, Pueblo, resigned.——Dr. Eugene H. Robertson, Boulder, has resigned the chair of pathology and bacteriology in the University of Colorado.——Dr. Alice B. Guthrie, Denver, is seriously ill with ptomaine poisoning.

ILLINOIS.

Thousands for St. Mary's.—The fair recently held in Quincy for the benefit of St. Mary's Hospital netted $4,140.33 for the institution.

Trolley Receipts for Hospital.—On May 26 the entire proceeds of the street car system of Galesburg were given to the Galesburg Hospital.

Personal.—Dr. Samuel R. Hopkins, Springfield, has gone to Europe for a year of study.——Drs. John G. Massie, Belleville, and William C. Spannagel, East St. Louis, have been appointed physicians for St. Clair County.

Physicians of Illinois.—The State Board of Health has just published the final Supplement to the Official Register of Legally Qualified Physicians of 1903. The report shows that there are 9,980 physicians in Illinois. The secretary announces that the 1905 Report on Medical Education and Official Register of Physicians will be published about October 1.

Pass Merit Test.—As the result of the recent examinations for senior physicians at the Cook County institutions, the following have been placed on the eligible list: Nervous and mental diseases—Drs. Joseph M. Kearney, Elgin; Ralph C. Hamill, Chicago; Ernest S. Moore, Chicago; Groesbeck Walsh, Chicago; Benjamin Landau, Dunning; Clara Dunn, Chicago; Julius F. Wen Gleski, Chicago; Goodrich Snow, Princeton, and I. G. Blackmer, Dunning; tuberculosis—Drs. Ernest S. Moore, Chicago, and Benjamin Landau, Dunning; medicine—Drs. Ralph C. Hamill, Chicago; Benjamin Landau, Dunning; Goodrich Snow, Princeton, and Julius F. Wen Gleski, Chicago.

Chicago.

Personal.—Dr. and Mrs. James C. Gill have sailed for Europe. ——Dr. and Mrs. P. J. H. Farrell and family have gone to their summer home, East Elmira, N. Y.

Unger Liberated.—Dr. August M. Unger, who was sent to the state penitentiary July 11, 1901, on an indeterminate sentence for conspiracy to defraud a life insurance company, was released April 10.

Speed Parting Guests.—A farewell dinner was given to Dr. Llewellys F. Barker, who goes to Johns Hopkins, and Prof. John F. Jameson, who goes to the Carnegie Institution, by the faculty of the University of Chicago, May 27.

Rush Surgical Faculty.—Dr. John B. Murphy has been appointed a professor of surgery and will assume his duties in the fall semester. He has also been appointed attending surgeon to Presbyterian Hospital. Dr. N. Senn remains the head of the surgical department, limiting his duties to clinical work in the fall semester, and Dr. Arthur D. Bevan retaining his position in the department.

Deaths of the Week.—Measured by the mortality of the week public health conditions are extremely favorable. The total, 434 deaths from all causes, represents an annual rate of only 11.89 per 1,000. Since 1892 the average May mortality has been 15.10 per 1,000. Of the deaths, 62 were due to consumption, 48 to pneumonia, 43 to heart diseases, 42 to violence, 33 to Bright's disease and 28 to cancer.

Wins Fight Against Typhoid.—The Department of Health rejoices in the present showing as regards typhoid fever mortality. In the current issue of the *Bulletin* it is said:

Chicago's finally successful fight against typhoid fever covers a period of less than a dozen years.

In 1891 it had the highest typhoid death rate of any large city in the world—17.38 per 10,000 of its population.

In 1905 its typhoid rate is among the lowest—1.21 per 10,000 for the 147 elapsed days of the year, and a reduction of more than 93 per cent. from the rate of 1891.

The 1891 rate had a single obvious cause—a sanitary blunder. The 1905 rate is the result of persistent, intelligent sanitary effort.

Adds Fifth Year.—Rush Medical College announces that beginning with the session of 1905-1906 a fifth year will be added to the curriculum, which for the present will be optional. The work of this year will be that of (a) a fellowship in one of the departments of the college, or (b) an interneship in the hospital under the following conditions: 1. Each student taking such work will be under the supervision of the faculty by whom the hospital in which the interneship is taken must be approved. 2. The student must present evidence of thorough clinical work and, if possible, an exhaustive study of a selected group of clinical cases involving original work. 3. He will be required to pass a special examination at the end of the year. On the successful completion of this fifth year he will receive the degree of Doctor of Medicine *cum laude*.

MARYLAND.

Personal.—Dr. James H. Carpenter has been elected secretary of the Midland Board of Health.

Examiners Will Meet.—The Board of Medical Examiners of Maryland will hold the regular examinations in Baltimore, June 21 to 24. Applications will not be received after June 14.

Donations to Hospital.—The Board of County Commissioners of Cecil County has appropriated $2,000 toward the proposed Union Hospital of Cecil County, Elkton. Citizens of the county have already subscribed $2,500 and the state will appropriate $5,000, making a building fund of $9,500.

Hospital Work.—The seventh annual report of Frederick City Hospital shows that 138 patients were treated during the year, 56 male and 82 female. There were 76 operations performed. There were 8 deaths, 5 surgical and 3 medical. There are 5 free beds. The receipts were $9,410 and the expenses $5,876, leaving a balance of $3,533.

Alumni Meet.—The spring meeting of the General Alumni Association of the University of Maryland was held May 25. A sketch of Prof. George W. Miltenberger, M.D., prepared by Dr. I. S. Stone of Washington, D. C., was read and a committee appointed to prepare for an appropriate celebration of the centennial of the association in 1907.

Baltimore.

Low Death Rate.—The death rate continues low. It was equivalent to an annual rate of 14.28 per 1,000 last week, and the rate for whites alone was 12.55 per 1,000.

Will Have Hospital.—The Board of Public Improvements has approved the ordinance appropriating $25,000 out of the levy for 1906, for an infectious diseases hospital.

Personal.—Dr. J. Hall Pleasants will be the resident physician at Buena Vista in the Blue Ridge Mountains.——Dr. J. Clement Clark, superintendent of Springfield Asylum for the Insane, has returned from Europe.——Dr. William Hewson Baltzell will spend the summer abroad.

Hospital Appointments.—Dr. Albert L. Wilkinson has been appointed resident physician in charge at the Hebrew Hospital,

and Drs. J. A. Seligman and Joshua Rosett, dispensary physicians.——Dr. Alexander D. McConachie has been appointed consulting ophthalmic surgeon to the Church Home and Infirmary to fill the vacancy occasioned by the death of Dr. Russell Murdoch.——At Bayview Asylum, Dr. H. D. Purdour, resident physician in charge of the insane department, has resigned to enter private practice, and Dr. N. N. Owensby has been appointed in his place. Drs. J. N. Hess and Jesse Stilwell have been appointed resident physicians.

MINNESOTA.

Hospital Notes.—Leslie Hospital, Duluth, has closed for lack of patronage.——K. J. Taralseth has given $1,000, and Mayor Lungren and Dr. Theodore Bratrud $750 each toward the Warren Hospital.——The new Pipestone City Hospital was publicly opened March 31.

Personal.—Dr. Albert F. Groves, Brainerd, has been elected president of the State Board of Medical Examiners.——Dr. Ernest E. Wells, Stillwater, has been appointed coroner of Washington County, vice Dr. George N. Watier, deceased.——Dr. F. J. Bohland-Fuchs and family have gone to Germany for six months.

Abortionists Sentenced.—Drs. William C. Van Damme, Minneapolis, and Matthew L. Hadsell, St. Paul, convicted of performing a criminal abortion on a young woman, were sentenced to imprisonment in the state penitentiary for four years.——Hannah M. Lund-Begin, for the same offense, has been sentenced to imprisonment for two years and four months.

Vetoes Chiropractic Bill.—The governor has vetoed Senator Gjertsen's chiropractic bill for the following reasons:

The best information of which I am possessed reveals to me the fact that chiropractic, so called, is a discovery of very recent origin, and was discovered and developed by men who were not learned in the science of healing disease. It is not apparent to me that the devotees of this so-called art in this state are possessed of the proper knowledge of anatomy and kindred subjects to properly constitute a board for the examination of others in those subjects.

The enactment of a law creating a state board of chiropractic examiners and registration, and to regulate the practice of chiropractic in the State of Minnesota, and to license chiropractors, will dignify this new and untried school to the extent that the people will look to it as panacea and remedy for the ills to which the human body is heir, and must, from the very nature of that confidence so established be more or less imposed on by practitioners who will have adopted this means to abuse the confidence of the public.

Chiropractic has not yet become a science or even a school, and is at best but an untried experiment, which has produced no lasting or definite results. Among the applicants for positions on this proposed board are insurance agents and men in other walks in life with absolutely no medical training whatever. The health of the public is the first essential, and should be safeguarded by every possible legal requirement, and if chiropractic must be recognized at all, those practicing this so-called art should certainly be required to pass examination in the essential branches, by due and regular examination before the state medical board, which represents the best thought and is the recognized and established standard which has been developed from the experience of the ages.

MONTANA.

Examining Board Election.—The State Board of Medical Examiners has elected Dr. Ernest Crutcher, Great Falls, president; Dr. William C. Riddell, Helena, secretary, and Dr. Robert D. Alton, Livingston, treasurer.

Propose Hospital for Havre.—At a recent meeting of business men of Havre Joseph Gussenhaven offered to donate 15 town lots as a site for a hospital. A committee was appointed to raise funds for the erection of the hospital.

President Entertains.—Dr. Thomas A. Grigg, Butte, the newly elected president of the Silver Bow County Medical Society, entertained about 30 members of the society and invited guests at dinner. Dr. John W. Gunn, Butte, presided as toastmaster.

Personal.—Dr. Arthur Jordan, Marysville, has been appointed deputy physician for Lewis and Clarke County, vice Dr. Oscar M. Lanstrum.——Dr. Edgar F. Dodds has returned to Missoula after two years of study in Europe.——Dr. Thomas J. Sullivan, Butte, has been appointed a member of the State Board of Health.

NEVADA.

Pneumonia Epidemic.—Pneumonia has been so prevalent in Tonopah as to cause great alarm, and has assumed almost the characteristics of an epidemic. Dr. Simeon L. Lee, Carson, secretary of the State Board of Health, who was sent to Tonopah to investigate the health conditions, reports that from January 1 to April 16, 56 deaths occurred, of which 47 were from pneumonia.

State Society Meets.—The Nevada State Medical Society convened at Reno for its first annual meeting since its reorganization, May 9, the president, Dr. W. L. Moore, Verdi, in the chair. In addition to the literary program the society was entertained at the Nevada Hospital for Mental Diseases, and at a banquet at the Riverside Hotel, at which Dr. J. A. Lewis officiated as toastmaster. The following officers were elected:: President, Dr. John E. Pickard, Virginia City; vice-presidents, Drs. John A. Ascher and John A. Lewis, Reno; secretary (re-elected), Dr. J. L. Robinson, Reno; censors, Drs. Clarence H. Woods, H. E. Hershiser, Reno, and H. E. Franck; delegate to the American Medical Association, Dr. George H. Thoma, Reno, and alternate, Dr. John A. Lewis, Reno. The society will meet next year in Reno.

NEW YORK.

Personal.—Dr. De Lancey Rochester, Buffalo, recently had a man arrested in the street cars for violation of the spitting ordinance.——Dr. John L. Archambault has been appointed health officer, and John M. Adey, registrar of vital statistics of Cohoes.

Donations to Hospitals.—Mrs. Alvira M. Bodwell has given $5,000 to the building fund of the Plattsburgh City Hospital, in memory of her husband, the late William H. Bodwell.——Mrs. Stella Leiter, Syracuse, has given $25,000 to the National Jewish Hospital for Consumptives, Denver, thereby carrying out her deceased husband's wish.

Preparing for Final Union.—The officers of the New York State Medical Association are taking every precaution to avoid legal difficulties that might prevent final action next October looking to the union with the Medical Society of the State of New York. Each individual member is being served with notice of the proposed action, and is given an opportunity to appoint a proxy if he can not attend the meeting himself. It looks now as though nothing could prevent that which practically every member of both the association and the society desires—union.

To Protect Milk Supply.—Governor Higgins signed Assemblyman Ambler's bill requiring owners or operators of milk stations to procure licenses from the state commissioner of agriculture. In applying for such license the operator must file an affidavit declaring that he will not take part in or permit the adulteration of milk at his station. There is an amendment to this bill which declares that no one shall sell or offer for sale any imitation or semblance of cream which is not cream, and also an amendment which provides that no person purchasing milk or cream at dairies on the basis of the amount of fat contained in the milk shall credit any patron with a greater percentage of fat than is acually contained in the milk or cream so delivered. A part of New York City health officials has been inspecting the creameries along the line of the Erie Railroad and states that it has found a great improvement over the conditions formerly noted. There seemed to be no lack of co-operation on the part of any one.

New York City.

Fined for Irregular Issue of Certificate.—Dr. John W. Perille was fined $75 May 14 for signing the death certificate of a child who had died from bronchitis without having seen the patient or viewed the body.

War on Mosquitoes.—Dr. Alvah H. Doty, health officer of New York, has been appointed to direct the work of attempting to exterminate mosquitoes on Staten Island. One thousand dollars was appropriated for this purpose. It is expected that the residents of Staten Island will do their share of the work.

Personal.—Dr. and Mrs. Thomas E. Satterthwaite sailed on the *Kroonland* for Antwerp, May 27.——Dr. Jacob Sobel has been appointed adjunct pediatrist to Syndenham Hospital.——Dr. Albert H. Brundage, Brooklyn, has been appointed chairman and chief contributor for the department of toxicology and pharmacology of the Lewis and Clark Exposition, Portland, Ore.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended May 20, 769 cases of measles, with 10 deaths; 410 cases of tuberculosis, with 155 deaths; 345 cases of diphtheria, with 36 deaths; 201 cases of scarlet fever, with 13 deaths; 99 cases of cerebrospinal meningitis, with 72 deaths; 23 cases of typhoid fever, with 9 deaths; one fatal case of smallpox, and 152 cases of varicella.

Bar Meningitis Cases.—On the theory that cerebrospinal meningitis is contagious, several hospitals have declined to

take patients suffering from this disease. Bellevue Hospital, with an out-door ward set apart for the disease, is receiving an average of half a dozen cases daily. Flower Hospital has closed its doors to the disease by a vote of 2 to 1 of its directors. New York, Roosevelt and Presbyterian hospitals have turned away many meningitis cases because their children's wards are given up almost entirely to this disease.

Oppose City Hospital.—Dr. Darlington and Dr. Hermann M. Biggs, representing the Health Board of New York City, visited the town of Mamakating, Sullivan County, for the purpose of convincing the residents of that vicinity that it would be a good thing for them to have a sanatorium for the care of tuberculosis patients established in that town. About 300 citizens attended the meeting, the majority of whom opposed the project. It was stated that the institution would be a charitable one and that the patients would not be allowed outside the park. Decision was reserved.

New Society.—A new society called the Harvey Society, consisting of laboratory workers in New York City, has recently been established under the patronage of the New York Academy of Medicine. Its purpose is the diffusion of scientific knowledge in selected chapters of anatomy, physiology, bacteriology, pathology, pharmacology and physiologic and pathologic chemistry, by the means of public lectures by men who are workers in the subjects presented. Each lecture is intended to represent the state of modern knowledge concerning the topic treated and at the same time will be adapted for presentation before an audience consisting of that portion of the general medical profession who are interested in the scientific side of medicine. It is hoped that through these lectures the common interests of research workers and the medical profession may be profitably cultivated. The fulfillment of the purposes of the society has been entrusted to the hands of the following committee: Dr. Graham Lusk, president; Dr. Simon Flexnor, vice-president; Dr. George B. Wallace, secretary; Dr. Frederic S. Lee, treasurer, and Drs. Christian A. Herter, S. J. Meltzer and E. K. Dunham. The members of the society consist of two classes—active and associate. Active members are laboratory workers in the medical sciences residing in New York; associate members are such persons as may be in sympathy with the objects of the society and reside in New York. The first course of lectures will be given on Saturday evenings next winter at the Academy of Medicine.

NORTH DAKOTA.

State Board Organizes.—The State Board of Health met at Bismarck for organization May 8 and elected Attorney General C. N. Frich, president; Dr. Edward C. Haagensen, Hillsboro, vice-president, and Dr. Henry H. Healy, Grand Forks, secretary.

Hospitals Incorporated.—Sheyenne Kreds Hospital Association, Rugby, has been incorporated.——Lutheran Hospital Association has been incorporated at Fargo, with a capital stock of $50,000.——St. Alexius Hospital has been incorporated at Bismarck, and contracts for its construction have been let.

OREGON.

Personal.—Dr. F. W. Van Dyke, Grant's Pass, has returned from Europe.——Dr. Gustav Baar, Portland, returned from Europe May 18.——Dr. Woods Hutchinson, Portland, is about to remove to Los Angeles, Cal.——Dr. A. C. Stanley has just begun his ninth term as mayor of Gold Hill. In honor of the event the citizens presented him with a gold-headed cane.

City and County Society Elects.—At the annual meeting of the City and County Medical Society, Portland, May 17, the following officers were elected: Dr. Henry W. Coe, president; Dr. William H. Skene, vice-president; Dr. Alexander D. Mackenzie, secretary; Dr. Joseph A. Pettit, treasurer, and Drs. Edward P. Geary, Andrew C. Panton and Otto S. Binswanger, censors.

PENNSYLVANIA.

West Penn Commencement.—A class of 63 was graduated from the Western Pennsylvania Medical College, Pittsburg, June 1.

A Dangerous Occupation.—The report of the state department of mines for 1904 for the 15 anthracite districts shows that out of 161,330 employes, 595 fatal accidents occurred and 1,407 non-fatal accidents during the 213 working days.

Personal.—Dr. William R. Batt, of Philadelphia, has been appointed state registrar of state vital statistics by the State Board of Health.——Dr. William O. Lubken, Johnstown, has been seriously ill with appendicitis, but is now improving.——Dr. J. Dan Hogue has been made a resident physician of Altoona Hospital, vice Dr. E. L. Wignall, resigned.

Hospital Appointments.—Allentown Hospital, Dr. Mahlon G. Miller; St. Vincent's Hospital, Erie, Dr. Charles A. Davlin; Mercy Hospital, Pittsburg, Drs. Jocelyn J. Emmens and Joseph J. Levy; West Chester Hospital, Dr. D. Edgar Hutchinson; Wilkesbarre City Hospital, Drs. James J. Mac Fayden, Jr., and A. Burton Smith; Mercy Hospital, Wilkesbarre, Dr. Hugh J. Lenahan.

Philadelphia.

Resignation.—Dr. Edith Warner Cadwallader has resigned from the chair of obstetrics in the Woman's Medical College of Pennsylvania, to take effect on the election of her successor.

In Memoriam Frances Emily White.—A bronze tablet in memory of Dr. Frances E. White, late professor of physiology at the Woman's Medical College of Pennsylvania, was unveiled May 18.

Entertainment for Charity.—On May 24 and 25 a bazaar of nations was held at the residence of Mr. John Wanamaker for the benefit of the Jefferson Maternity Hospital. The enterprise was well patronized and nearly $5,000 was realized for the charity.

Hospital Buildings Dedicated.—Four new buildings of the Methodist Episcopal Hospital, erected at a cost of more than $120,000, were dedicated with appropriate ceremonies May 23. The new buildings are the Mary T. Hunter Home for Nurses, the Mary Burton Dispensary building, a new ambulance house and power plant.

Hospital Appointments.—Medico-Chirurgical Hospital, Drs. W. F. Keating, J. J. Moore, C. H. Elliott, S. H. Martin, H. B. Fraile, R. Nebinger and A. Swayne; Frankford Hospital, Drs. John J. Lynch and Thomas C. Ross; Jefferson Medical College Hospital, Drs. J. Howard Anderson, S. A. Munford, F. P. Herff, E. G. Maier, Wayne L. Snyder, L. F. Milliken and C. H. McCallum.

Keen Research Fellowship.—As a memorial to his wife, Dr. William W. Keen has founded the "Corinna Borden Keen Research Fellowship" at Jefferson Medical College, by a gift of $5,000 to the trustees. The fellowship will be awarded in 1907, and every two years thereafter, and the recipient must spend at least one year, in America or abroad, in some especial line of research work.

Commencement.—The annual commencement exercises of the Medico-Chirurgical College were held May 27. President Henry F. Walton conferred the degrees on a class of 85, and Hon. William N. Ashman delivered the doctorate address.——The eightieth annual commencement exercises of Jefferson Medical College were held June 2. The diplomas were presented to a class of 180 by Hon. William Potter, president of the board of trustees, and the oration was delivered by Rev. Dr. J. Andrews Harris.

Health Report.—The whole number of deaths for the week was 400, a decrease of 50 from the previous week and a decrease of 95 from the corresponding period of last year. The principal causes of death were as follows: Typhoid fever, 13; diphtheria, 6; epidemic cerebrospinal meningitis, 1; pulmonary tuberculosis, 46; cancer, 14; apoplexy, 21; heart disease, 34; acute pulmonary disease, 47; enteritis, 20, and Bright's disease, 33. There were 208 cases of contagious disease reported with 21 deaths, as compared with 193 cases and 19 deaths for the preceding week.

Hospital Elections.—The following were elected to compose the staff of the Jewish Maternity Hospital: Medical director, Dr. Isaac Leopold; consulting obstetricians, Drs. Lucy N. Tappan and Joseph Price; consulting surgeons, Drs. Lewis W. Steinbach and Charles P. Noble; consulting ophthalmologist, Dr. Isaac Leopold; consulting neurologist, Dr. Francis X. Dercum; consulting pathologist, Dr. David Riesman; consulting dermatologist, Dr. Jay F. Schamberg; consulting pediatrician, Dr. Eleanor C. Jones; obstetricians and gynecologists, Drs. Clara T. Dercum, Daniel Longaker, Helen Kirshbaum, Edwin A. Heller, Ludwig Loeb and Leo H. Bernd; pediatrician, Dr. L. Valentine Levi; dispensary physicians, Drs. Clara T. Dercum, Daniel Longaker, Helen Kirshbaum, Edwin A. Heller, Ludwig Loeb, Leo H. Bernd, Moses Behrend, I. Valentine Levi, Justin H. Schwerin, Ellis E. W. Given, D. A. Feldstein and Louis P. Steinhart, and resident physician, Dr. Elizabth F. Lewis.

WASHINGTON.

New Wings for State Hospital.—Ground was broken, May 12, for the new wings for the Western Washington Hospital for the Insane, Fort Stellacoom. The buildings will cost about $95.000.

Recommitted to Hospital.—Dr. B. H. Yount, Wilbur, who was committed to the Eastern Washington Hospital for the Insane, Medical Lake, on account of drug addiction and was released on parole in March, was recommitted to the hospital May 10.

Hospital Notes.—Work on the new $75,000 Deaconess' Hospital, Spokane, will begin this month. At first the east wing will be built. It will cost $14,000, of which the association has already $7,000 in hand.——A permit has been issued for the erection of a hospital at Ballard.——The Old Town Emergency Hospital, Tacoma, has been incorporated with a capital stock of $3,000.

Unlicensed Practitioner Fined and Imprisoned.—Dr. O. V. Lawson, who conducts a "medical institute" in Seattle, on April 29, was found guilty of practicing medicine without a license and was given the maximum penalty, a fine of $1.. and imprisonment for 90 days in the county jail The prosecution of Lawson was at the instance of the King County Medical Society.

Personal.—Dr. Wilbur N. Hunt was confirmed, May 15, as health officer of Bellingham. Dr. Howard E. Henderson resigned.——The employes of the Granby Smelter, Grand Forks, presented Dr. E. R. Northrop with a silver loving cup, April 28, as a farewell token of regard. Dr. Northrop will practice in Spokane.——Dr. William H. Anderson, Medical Lake, has been appointed superintendent of the Eastern Washington Hospital for the Insane, vice Dr. W. James Howells, whose term expires in October.——Dr. Charles B. Stewart, Walla Walla, has been elected physician of Walla Walla County.

WYOMING.

Examiners Elect.—At the annual election of the State Board of Medical Examiners Dr. E. P. Rohrbaugh, Casper, was elected president; Dr. Samuel B. Miller, Laramie, secretary, and Dr. Oliver Chambers, Rock Springs, vice-president.

Sanatorium for Disabled Soldiers.—A bill has been introduced in the senate to appropriate $150,000 to establish a sanatorium at Thermopolis for disabled volunteer soldiers, and to appropriate an additional $20,000 for equipment of the institution and transportation of soldiers.

Cross Suits.—In the case in which Dr. Lawrence P. Desmond sued Mrs. Margaret Moore, Cheyenne, for professional fees, and in which Mrs. Moore filed a cross suit against Dr. Desmond for damages on account of alleged malpractice, in the treatment of a broken limb, the jury on May 24 gave Mrs. Moore a verdict for $199.50.

Personal.—Dr. John W. Padgett, Lander, has been appointed assistant surgeon, Wyoming national guard, with the rank of captain.——Ex-Governor Dr. Amos W. Barber, Cheyenne, was operated on for appendicitis in Omaha, May 20.——Dr. R. Harvey Reed, Rock Springs, who has been seriously ill for several months in Chicago and went to California to recuperate, is improving.

GENERAL.

Japanese and Trachoma.—It is reported that every month more than 25 Japanese suffering from trachoma are landed at San Francisco. They evade the immigration laws by a short residence in Hawaii, just long enough to obtain a passport to the United States.

Dr. Wyman Visits Hawaii.—Surgeon-General Walter Wyman of the United States Public Health and Marine-Hospital Service sailed Wednesday last on the transport *Sheridan* for Honolulu. He made a short visit in Chicago on his way West. He goes to consult with the governor of Hawaii and the Territorial Board of Health concerning the establishment of the station for the study of leprosy and its treatment. General Wyman will return in time to attend the Portland session of the American Medical Association.

FOREIGN.

Memorial to Von Esmarch.—The memorial to von Esmarch at Tönning, his birthplace, will be unveiled August 6. The principal address will be delivered by Professor Küster of Marburg.

Personal.—Dr. Edward H. Yume, Yale '97, and a graduate of Johns Hopkins University Medical School, has been appointed head of the medical department of the Yale College in Chungsha, China.

Smallpox in Sicily.—It is reported that there are about 60 cases of smallpox in Catania. The prefect of the city has ordered all the inhabitants to be vaccinated. Anyone refusing to comply with this order may be imprisoned or fined.

Koch in Africa.—Robert Koch is now in the interior of Africa, prosecuting his researches, and does not expect to return to the coast until the end of July. He is in the neighborhood of Iringa, and expects to return to Europe next spring.

Yellow Fever in Rio de Janeiro.—According to *Public Health Reports*, yellow fever is still present in Rio de Janeiro. Since January 1 there have been 198 cases of this disease, with 76 deaths. By far the greater number of deaths were among foreigners, and of 36 deaths in April, 31 were of other than natives of Brazil.

Low Birth Rate in London.—The registrar general's annual summary shows that London has lost over 36,000 lives through its falling birth rate, though it has saved 7,904, owing to the decline in the death rate. Roughly speaking, in London there are 25 per cent. fewer births than in 1870-72. In addition to this the report shows that for every seven children born one under the age of one year died.

Bequest to a Mexican Hospital.—It is reported that a wealthy young woman of Chihuahua, who is suffering from an incurable disease, has made a will endowing the Miguel Salas Hospital in Chihuahua with property valued at $2,000,000. The administration of this endowment will be in the hands of a commission with the governor of the state as chairman. It is provided that hospitals shall be established in other towns in the state of Chihuahua with funds arising from the endowment.

A Physician's Bequests to Medical Charities.—The will of the late Dr. Goburek of Tilsit, Germany, disposes of a large property, and most of it is given for benevolent purposes. It bequeathes $50,000 to the endowment fund for the orphans of physicians; the same amount to the fund for insurance of physicians; $25,000 to aid physicians in need; $50,000 to local benevolent institutions; $62,500 for loans without interest to women medical students, and nearly $40,000 to install public carbonated and hot baths.

Inoculation Against Plague in India.—An officer on plague duty, hearing that persons inoculated in 1902-3 were immune the following year instituted inquiries. In a group of twenty villages, among 34,680 persons who were not inoculated with antiplague serum, 2,040 cases of plague occurred, with 1,495 deaths. Among 11,059 persons who were inoculated only one case occurred; the patient died. Even allowing a liberal margin for error, says the *Public Health Reports*, this is a striking illustration of the prophylactic effects of year-old inoculations.

The Don Quixote Tercentennial.—Again the *Siglo Medico* of Madrid appears in gala dress, this time on account of the celebration of the tercentennial of the publication of Cervantes' Don Quixote, followed by the banquet tendered to the new cabinet minister, Dr. Cortezo, the co-editor of the *Siglo*. The medical faculty of the university arranged a public celebration in the San Carlos theater, with addresses on the medical features of Don Quixote. Ramon y Cajal was one of the speakers, and the entire proceedings were extremely interesting and elevating. The theater was crowded to the doors. The topics treated were recently mentioned in these columns.

Damage Suit in the Profession.—The *Progrès Médical* quotes a daily paper to the effect that for nearly a year the wealthy families of Berne have been receiving anonymous letters denouncing two of the best known physicians of the city with specific accusations. The two physicians suspected a certain confrère of the slanders, and sent a young man to offer him a lot of fine writing paper at a very low price. The paper had a private mark on it, and it was not long before the anonymous letters were found to be written on this very paper. The two physicians brought suit against the offender and he confessed at once and settled the damages for $20,000. The two physicians divided this sum among three local charitable institutions.

Duhrssen's Acquittal.—A suit has long been dragging through the German courts in which Professor Dührssen was sued for damages. He found it unexpectedly necessary to remove the uterus on account of uncontrollable hemorrhage when operating on a woman for the relief of sterility. The medical experts stated that he should have informed the

patient beforehand of the possible danger of the operation, but the court decided that a physician is not legally bound to inform his patients in regard to the dangers of any affection or disease. In the present case he was unable to foresee the possible danger as all his similar interventions in the past had proceeded without mishap. The supreme court recently reaffirmed this decision so that the matter is finally settled in his favor.

Determination of Sex by Dieting.—A paper was read by Dr. Weill of Schwalbach at the recent German Congress of Internal Medicine in which he presented arguments in favor of his theory that the sex of the embryo is determined by the preponderating elements of the diet. He reported experiments with laboratory animals, bees and cattle which demonstrated that when carbohydrate elements predominated in the food more males than females were produced. If albuminoid elements predominated the female embryos were in the majority. He explains this as due to the fact that there is a constant struggle for supremacy between the male and female cell. Carbohydrate elements favor the male cell and albuminous elements throw the influence on the side of the female cell. Careful dieting, he believes, can thus effectually predetermine the sex of the offspring.

Roentgenology.—Before the Roentgen Congress at Berlin adjourned it adopted a resolution to the effect that the name of Roentgen should be perpetuated in every technical term referring to the use of the *x*-rays, as in Roentgen treatment, roentgenogram, to roentgenize, etc. Another resolution adopted by an almost unanimous vote was to the effect that the application of the Roentgen rays should be legally restricted to physicians, as belonging exclusively to the medical domain. This vote was taken after a communication from Hennecart of Sedan, who referred to the clinical and experimental research which has established that the Roentgen rays, applied to the ovary or testicle, render them rapidly and permanently sterile. The *Semaine Médicale* of May 17 has an interesting letter from the congress. It describes a large sarcoma of the skull as completely retrogressing under Roentgen exposures.

Prevention of Intoxication from Canned Vegetables.—Severe intoxication occured in a Darmstadt cooking school last year after the eating of a salad made from canned beans, as was mentioned in THE JOURNAL at the time. German authorities have had experts studying the subject since, and they now announce that there can be no doubt that fission fungi are able to develop in canned vegetables even when hermetically sealed. The toxic metabolic products of the fungi are liable to induce morbidity the same as the ptomains of meat. The toxin generating germs probably get on the vegetables from their being sprinkled or watered with water containing human excretions. All canned vegetables should be thoroughly heated before being eaten, to destroy any possible germs present. If the canned vegetables smell peculiarly—as was noticed in the case at Darmstadt—they should not be used at all, and certainly not as a salad without previous thorough heating.

Epidemic of Criminal Abortions in Paris.—A Paris exchange of recent date contains an article by Professor Mauclaire expatiating on the way in which the surgical wards are being crowded with women suffering from the effects of abortion. He says that almost a third of the patients in the surgical wards are cases of the febrile sequelæ of criminal abortion, generally autoabortion. Recent statistics by Paris obstetricians have shown that the number of abortions has more than tripled of late years in their experience, and in more than half of the cases the abortion was induced. The accouchcurs refuse to take the infected cases into their maternities for fear of infecting other patients, and the surgeons complain of this flood of infected material in their services. A special ward for this class of cases is being discussed. A surgeon is to be in charge, not an obstetrician, as the numerous consecutive measures possibly required call for the surgeon rather than the accoucheur.

The Visit of the British Physicians to Paris.—More than 200 physicians from the British Isles accepted the invitation of their French confrères to return the visit to London of the French physicians last year. The medical faculty received them May 10 in robes of state, and the dean in welcoming them remarked that science has no country, but its devotees have one: "In this common fatherland there is no persecution for political or religious opinions. War—that disgrace of mankind—is unknown. All work in common to enlarge the store of knowledge, to relieve distress and to prevent or cure disease. Fellow-citizens of this beloved fatherland, the English physicians are at home within the walls of this ancient medical college, and the walls greet you as friends long waited for." One of the receptions was held in "Washington Palace." The entire expenses of the two excursions to Vichy and Biarritz, by special train, were paid by the French. The *Lancet* for May 20 devotes 12 pages to a breezy letter describing the medical and other institutions of Paris visited by the party.

Spirobacteria in the Lesions of Syphilis.—The spirochæta which Schaudinn and Hofmann have recently reported as found constantly in syphilitic glandular lesions has been found by Metchnikoff in 4 out of 6 monkeys that had been successfuly inoculated with syphilis. He also found it in 4 out of 6 syphilitic young men, and was unable to detect it in other cutaneous lesions examined. Bordet and Gengou found a spirochæta in a syphilitic chancre and in throat lesions, as long ago as 1902, but did not venture to ascribe etiologic importance to it. Schaudinn and Hofmann were able to distinguish two varieties in the syphilitic lesions, one with sharper coils, more like those of a corkscrew, which they call the *S. pallida*. The other is larger, takes the stains better and its coil is more undulating. It is difficult to stain the *S. pallida* and it has thus far proved impossible to cultivate. It varies from 4 to 14 microns in length, while it is less than .25 micron in diameter, with 6 to 14 turns in its spiral. Their article is published in the *Deutsche med. Wochft.*, May 4, while Metchnikoff's communication on the subject was presented to the Paris Académie de Médecine, May 16. Buschke has since reported the finding of the same *Spirilla pallida* in large numbers in the spleen and liver of a four months' babe with inherited lues. Schaudinn and Hofmann's report was based on 8 cases.

LONDON LETTER.

The Centenary of the Royal Medical and Chirurgical Society.

The greatest though not the oldest of the London medical societies is about to celebrate its centenary. The Royal Medical and Chirurgical Society was founded in 1805 as an offshoot from the Medical Society of London, which was founded in 1773. Among its founders were Sir Astley Cooper, the surgeon; Dr. Matthew Baillie, the morbid anatomist; Dr. William Babington, the physician, and the celebrated Abernethey. In 1834 it obtained the charter by which it was constituted a royal society. In that year the president was Dr. Elliotson, a physician of University College Hospital, who fell into great disrepute because he took up and advocated mesmerism. In 1889 the society moved to its present stately and commodious premises, where a library of 40,000 volumes is housed. The transactions of the society now run to many volumes and contain much of the most important contributions to medical literature by English writers. They also contain much of the work which has rendered famous the names of Marshall Hall (the discoverer of reflex action), Bright, Addison, Jenner, Spencer Wells, Sir Henry Thompson, Kirkes (the discoverer of embolism), Liston's first operation for the removal of the scapula, Paget (the discoverer of trachina), and Hutchison. As previously reported in THE JOURNAL, the society is taking the leading part in the movement for confederating the medical societies of the metropolis.

Pharmacology

COUNCIL ON PHARMACY AND CHEMISTRY
American Medical Association.

OFFICIAL REPORT ON ACETANILID MIXTURES.

The following report has been approved by the Council:

To the Council on Pharmacy and Chemistry of the American Medical Association:

In response to the request of your chairman we have investigated the below-mentioned preparations and report as follows:

Specimens of the articles were bought in different cities in the open market, and in original, sealed packages, and were analyzed by some of us or under our direction. Each article was examined by at least two chemists, and some were subjected to several analyses. While certain of the preparations are represented as being chemical compounds, the specimens examined were all found to be mixtures; the principal ingredient being acetanilid. The percentage proportions of

acetanilid given below are the minimum obtained by any of the analysts.

Soda and ammonia, combined with carbonic acid, are calculated and reported as sodium bicarbonate and as ammonium carbonate (U. S. P.), respectively. Salicylic acid is calculated and reported as sodium salicylate. Diluents and other constituents than those reported were not determined.

AMMONOL.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Ammonium Carb.
50.	25.	20.

ANTIKAMNIA.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Caffein	Citric Acid	Sodium Bicarb.
68.	5.	5.	20.

KOEHLER'S HEADACHE POWDERS.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Caffein
76.	22.

ORANGEINE.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Caffein.
43.	18.	10.

Other constituents said to be present were not determined.

PHENALGIN.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Ammonium Carb.
57.	29.	10.

Certain packages of phenalgin were purchased which on analysis did not show ammonium carbonate.

SALACETIN.

According to the analyses of the contents of the original sealed packages as purchased, this was found to be a mixture, and to contain the following ingredients approximately in the proportions given:

Acetanilid	Sodium Bicarb.	Sodium Salicylate.
43.	21.	20.

We recommend that this report be printed in THE JOURNAL of the American Medical Association.

Respectfully submitted,

J. H. LONG, M.S., Sc.D.,
W. A. PUCKNER, PH.G.,
S. P. SADTLER, PH.D.,
J. STIEGLITZ, PH.D.,
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} Committee on Chemistry, Council on Pharmacy and Chemistry of the A. M. A.

THE COAL-TAR PRODUCTS—ESPECIALLY ACETANILID.

The extensive use of acetanilid makes it of interest briefly to recite the origin and history of the coal-tar preparations. In the destructive distillation of coal, by heating it in a closed retort for the production of illuminating gas, there are produced various gases, the residual coke and the intermediary tar. From the latter are derived a great variety of products, consisting of several volatile liquids, principally benzene or benzol and toluene or tuluol, the so-called aromatic alcohols, phenol and cresol, a great variety of bases of the ammonia type, including anilin and the solid naphthalin, etc. Of these, phenol or carbolic acid first became generally known and was extensively employed as a disinfectant and antiseptic, followed shortly by salicylic acid, the first of the long series of medicinal chemicals produced synthetically from phenol, by a process patented by Kolbe, a German chemist, in 1868.

While anilin is found in small quantities in coal tar, not until it was produced artificially did it become important. By action on *benzene*, which is chemically phenyl hydrid (C_6H_6) (and which should not be confused with the liquid of similar name, but of low specific gravity, a mixture of low-boiling hydrocarbons obtained by fractional distillation from petroleum, called *benzin*, petroleum ether or naphtha) the benzene molecule is changed into nitrobenzene ($C_6H_5NH_2$), called oil of mirbane or artificial oil of bitter almond, owing to its peculiar odor and flavor. When subjected to nascent hydrogen, the nitrobenzene is changed into anilin, phenylamin, or amidobenzene ($C_6H_5NH_2$), an oily liquid of strong basic properties which forms crystallizable salts with acids. It is from this liquid anilin that the numerous coal-tar dyes or colors are obtained. They are mostly highly colored and, as is well known, have almost superseded the vegetable dyes; the so-called azo-dyes; alizarin and even artificial indigo having been produced.

ACETANILID.

With acetic acid, however, anilin produces a colorless compound, and this crystallized salt obtained through interaction of anilin and acetic anhydrid is chemically phenyl-acetamid ($C_6H_5NH\ C_2H_3O$), or acetanilid (acetanilidum, U. S. P.). While known experimentally to Liebig and other chemists, it had received no attention until about 1888 when it was found that a synthetic chemical of German origin, introduced under the trade name antifebrin, was nothing but acetanilid. Since this preparation sold at $1.00 an ounce, and acetanilid could be produced for less than half that amount a pound, the monopoly of antifebrin was short lived; the medical and pharmaceutical journals soon making the fact of their identity widely known. Possibly because of this, but more especially because of the extravagant claims for antifebrin, and also because acetanilid bid fair to become a strong rival of antipyrin, and later of phenacetin, the opportunity was seized to use it as a base for certain mixtures under more or less deceptive names, suggestive of entirely new chemical compounds, and thus to exploit the medical profession through the most extravagant and absurd therapeutic claims, all for the purpose of foisting these inexpensive articles on physicians at exorbitant prices.

Acetanilid is distinguished by the so-called isonitril reaction, viz.: On heating 0.1 gm. acetanilid with 5 c.c. solution of KOH (1 in 4) the characteristic odor of anilin is observed; by now adding 1 c.c. chloroform and again heating, the disagreeable odor of the poisonous phenyl isocyanid is evolved.

From the description of the properties of acetanilid, it was quickly recognized that associating it with an alkali would make the salt more soluble, thus insuring more uniform action. Sodium bicarbonate and subsequently ammonium carbonate were thus combined with the acetanilid in various proportions, and to this was sometimes added caffein. To make this mixture more soluble and also to mask the alkaline taste by partial neutralization some added citric acid also.

PHYSIOLOGIC ACTION.

The important physiologic action of acetanilid is to reduce temperature, probably by converting oxyhemoglobin into methemoglobin in the red corpuscles and by interfering with oxidation. In small doses, the action of the skin and kidneys is increased, the blood pressure is raised; this is probably brought about by contracting the smaller vessels by direct action on their muscular coat.

After large doses, the changes in the red blood corpuscles are so great that the effects are shown in the urine by the passage of altered blood. An urticarial rash is sometimes produced by its internal administration. According to White

and Wilcox, it causes a fall in temperature, not by its action on the blood and circulation (as stated by Shoemaker) but by diminishing heat production through its action on the corpus striatum, which is said to be the center for heat production. To a slight extent, it increases heat dissipation, as has been shown by experiments. No effect on respiration is produced, according to Hare, except when it is given in large doses. When toxic doses are administered the breathing becomes rapid and labored and death may be produced by paralysis of the respiratory centers due to primary changes in the blood which so influence oxygenation of the tissues as to affect these centers. That the action of acetanilid is more pronounced on the blood than on any other part of the system is generally recognized. Consequently, its effects on the circulation, respiration, temperature and elimination are all probably secondary to the blood changes brought about by too large a dosage or by prolonged use. Under its continued use congestion of the liver, kidneys and spleen takes place. Hare has recorded a number of cases in which unfavorable signs have appeared after its use. The dose which most commonly produced the symptoms ranged from three to ten grains (gm. 0.20 to 0.65).

Dr. F. E. Clark[1] states that while it is a valuable medicament, there are certain dangers which have been more or less emphasized in the reports on this preparation, though no more than attend other preparations of the same class. In this connection he emphasizes the importance of care in its employment in the treatment of new patients whose constitutions and idiosyncrasies have not been properly studied, necessary precautions have not in all cases been observed in its administration, but in some cases it has been abused. Its value, on the other hand, according to this writer, has been overrated. As the chief untoward effects of acetanilid are on the heart and circulation as a depressant, he recommends that camphor be combined with it as a stimulant or that some form of liquor be used with it. He warns against the use of those proprietary preparations which are constituted principally of acetanilid and sodium bicarbonate as being dangerous to a lamentable extent, as soda is not a corrective of the dangers of acetanilid.

MEDICINAL USE.

Internally, acetanilid exerts an anodyne, sudorific, antipyretic and slightly soporific effect. He goes on to state that as an anodyne, acetanilid is very inferior to the well-established anodynes, no matter what the cause, and that in the treatment of "headaches" it must be remembered that the other ingredients combined with acetanilid are capable of curing the headache, such as caffein or guarana, potassium or sodium bromid. Consequently, he is of the opinion that too much credit is given to acetanilid. In incipient coryzas, in certain bronchial affections and in pharyngitis—called "colds" by the public—acetanilid acts very efficiently, given ordinarily in doses of from 3 to 5 grains (gm. 0.20-0.30) each and repeated every two or three hours until perspiration is established. Acetanilid, given in 5 grain (0.30) doses at bedtime, followed by a hot footbath and a hot lemonade, is superior, in Clarke's opinion, to quinin or Dover's powder.

As a soporific, it is of some value, but is less useful than the opiates. Externally employed, it acts aseptically and antiseptically. As an anodyne locally it is of less value than resorcin. As an aseptic, he claims, it is the equal of iodoform, and is devoid of the odor. He recommends it espeecially in the treatment of ulcers of the leg of the varicose variety.

ACETANILID POISONING.

That the use of acetanilid as a local application is not without its dangers has been demonstrated by a report of Manasses,[2] who mentions two cases of acute symptoms of poisoning following the free use of acetanilid as a dusting powder on abraded surfaces in young children. The usual toxic symptoms were produced, such as cyanosis, subnormal temperature and extreme prostration, which, however, were successfully combated by stimulants.

In regard to chronic acetanilid poisoning, we refer to the article by D. D. Stewart[3] in this issue.

It must be kept in mind in prescribing acetanilid mixtures that no action is produced by them on the cure of the disease. They are of value in the treatment of symptoms mainly, such as relieving pain and reducing temperature. Therefore, to obtain permanent results, other measures can be employed which are of greater value. In cases of fevers, according to von Jaksch, the patient is not made better by these drugs, but, on the other hand, convalescence is prolonged. The effects of antipyretics vary not only with the dose, but, as expressed by Cushny, with the individual patient. Many individuals can take without apparent harm, very large doses of these preparations, while in others minute quantities produce alarming symptoms.

1. Boston Med. and Surg. Jour., November, 1904.
2. International Med. Mag., May, 1901.

3. See page 1725.

Correspondence

Skipping Rope Fatalities.

NIAGARA FALLS, N. Y., May 17, 1905.

To the Editor:—Referring to your editorial in THE JOURNAL, April 29, p. 1374, I desire to call your attention to the fact that when a girl jumps the rope to break a record the count is only for the number of times that the rope swings under the feet. While the rope is passing over the head and back to the feet a half jump takes place, thus giving the child her balance for the next spring that will throw her feet high enough to clear the rope again. Thus, in order to clear the rope 250 or more times, the same number of half-jumps are required. The succession of rope-jumps has a peculiar jar about it that is a harmful exercise for the body when long continued. When we consider also the rhythmic movement that must of necessity take place to perform such a feat, I think it will be easy to discover that the strain on the body would be like the strain on a long bridge in case an army of men were marched across it all in perfect marching step. It is the long continued unison jar or vibration that does the mischief. When the children *skip* the rope as they do when they run and let the rope pass under their feet as they step, there is no sudden jar to the body and, further, long runs are not made. It is my belief that rope-jumping should be discouraged by physicians.

W. E. MCCHESNEY, M.D.

CHICAGO, May 23, 1905.

To the Editor:—Your point against rope-jumping is well taken. During a period of four years as medical inspector and medical advisor in certain Philadelphia schools I took every opportunity to discourage rope-jumping, and particularly for all girls over 11 years of age. My objection was that that exercise tended to cause displacement of the uterus of adolescent girls. I would urge physicians to discourage rope-jumping.

WINFIELD S. HALL, M.D.

Marriages

JOHN M. BOYLES, M.D., to Miss Agnes Mattes, both of Shelby, Mo., May 14.

ROBERT WOOD, M.D., Washington, Ind., to Miss Stella Rogers of Indianapolis, April 1.

BAYARD G. KEENEY, M.D., to Miss Ethel Adams, both of Shelbyville, Ind., June 1.

JAMES C. MORLEY, M.D., to Miss Katie Sweets, both of Elizabethtown, Ky., June 1.

EDWARD A. MAYBERRY, M.D., Enid, Okla., to Mrs. Marie Herrman of Lacy, Okla., May 21.

FREDERICK C. POEHLER, M.D., to Miss Eleanor Nesbitt, both of Minneapolis, Minn., June 1.

JAMES WILLIAM MCEWAN, M.D., to Miss Ethel Bowman, both of Detroit, Mich., May 17.

HARRY GARFIELD IRVINE, M.D., to Miss Etta McCabe, both of Minneapolis, Minn., May 31.

MOORE MOORE, M.D., Memphis, Tenn., to Miss Ethel Sara Sivley of Jackson, Miss., June 1.

THOMAS H. BAER, M.D., Defiance, Iowa, to Miss May Miller of Kenwood Park, Iowa, May 20.

ROBERT BLACKBURN LOVE, M.D., Livingston, Texas, to Miss Ola Greer of Goodrich, Texas, May 10.

JOHN H. O'DELL, M.D., Three Rivers, Mich., to Miss Lou Harvey of Constantine, Mich., May 17.

NICHOLAS ALBERT BALTZELL, M.D., Marianna, Fla., to Miss Edith Schmelz of Hampton, Va., June 1.

EARL MCDONALD RUSK, M.D., Villa Ridge, Mo., to Miss Effie Mabel Simpson of Moselle, Mo., May 17.

JOHN WARD SHULTS, M.D., Wichita, Kan., to Miss Eudora Florence Underwood of Bowling Green, Ohio.

JAMES B. ANGLE, M.D., to Mrs. Mary E. Garrett, both of Greensboro, N. C., at Danville, Va., May 16.

PAUL C. BRIDGHAM, M.D., to Miss Gertrude Rosamond Murray, both of Cohasset, Mass., at Boston, April 19.

Deaths

Carl H. A. Kleinschmidt, M.D. University of Georgetown Medical Department, Washington, D. C., 1862, a member of the American Medical Association, its librarian from 1883 to 1890, a member of the Medical Society of the District of Columbia, who had held every office in its gift; a member of the Medical Association of the District of Columbia and its president in 1895; first president of the Board of Medical Examiners; for 14 years a member of the board of police surgeons; professor of physiology in the University of Georgetown from 1876 to 1902; one of the oldest and most prominent physicians of Washington; a veteran of the Civil War, died at his home in Washington, May 20, from general debility, aged 66.

Andrew W. McClure, M.D. Medical College of Ohio, Cincinnati, 1853, a member of the American Medical Association; some-time president of the Iowa State Medical Society, and of the district and county medical societies; surgeon of Fourth Iowa Volunteer Cavalry in the Civil War; for many years a member of the Board of Commissioners of Insanity of Henry County; trustee of the Iowa Hospital for the Insane, Mount Pleasant, died at his home in Mount Pleasant, May 21, after a long illness, aged 77. The physicians of the city served as honorary pall bearers and the members of the Grand Army post acted as escort at the funeral.

William Minturne Line, M.D. Jefferson Medical College, Philadelphia, 1851, a member of the American Medical Association, for many years a practitioner of Nebraska City, Neb., died suddenly from heart disease at his home in Aberdeen, S. D., May 9, after a long period of ill health, aged 81. The members of the medical profession of Aberdeen acted as pall bearers at the funeral.

Louis Fielding High, M.D. College of Physicians and Surgeons, Baltimore, 1891, a member of the state medical societies of Virginia and North Carolina and founder of the Pineshire Sanitarium at Southern Pines, N. C., died in a hospital in New York City, May 3, from sarcoma of the neck, after an illness of two months, aged 38.

William Stoner Kidd, M.D. Bellevue Hospital Medical College, New York City, 1898, formerly acting assistant surgeon, United States Army, but for the last year a resident of Arizona, and physician of the Arizona Coffee Company at Morenci, died at Tucson, March 12, from tuberculosis, aged 30.

Erwin Fischer, M.D. University of Tübingen, Germany, 1887, for several years surgeon on the North German Lloyd Steamship Line, and assistant physician of the Tübingen Hospital, died from abscess of the brain at his home in Pittsburg, Pa., May 21, after an illness of five weeks, aged 40.

Charlotte E. Mastin, M.D. University of Buffalo Medical Department, 1897, a member of the American Medical Association, and a prominent young practitioner of Wellsboro, Pa., died in the Buffalo General Hospital, May 20, a day after an operation for peritonitis, aged 33.

Jacob H. Asch, M.D., University of Berlin, Germany, 1864, a member of the American Medical Association, one of the best known German physicians of New York City, died at his home, May 19, from cerebral hemorrhage after an illness of only a few hours, aged 66.

Henricus W. Westlake, M.D. University of the Victoria College, Coburg, Ont., 1887, of Los Angeles, Cal., died at the Good Samaritan Hospital in that city, May 12, after an illness of five weeks, two days after an operation for abscess of the lungs, aged 48.

Henry Ward Chamberlain, M.D. College of Medicine and Surgery of the University of Minnesota, Minneapolis, 1901, died at his home in Bangor, Wis., May 21, from sarcoma of the testis, after an illness of nearly a year, aged 30.

Joseph Johnson, M.D. College of Physicians and Surgeons in the City of New York, 187--, died at his home in New Richmond, Wis., February 17, from cancer of the throat, after an illness of six months, aged 82.

Frank A. Xanten, M.D. State University of Iowa College of Medicine, Iowa City, 1876, of St. Paul, Minn., died at St. Joseph's Hospital in that city, May 17, from acute uremia, after a short illness, aged 51.

William Harry Longsdorph, M.D. Jefferson Medical College, Philadelphia, 1856, formerly treasurer of Cumberland County, Pa., a veteran of the Civil War, died at his home in Camp Hill, Pa., May 23, aged 71.

Henry Judy, M.D. Cincinnati, 1850, president of the Midland National Bank, Washington Court House, Ohio, died at his home in that city, March 9, after an illness of several years, from uremia, aged 76.

Leander L. Tidball, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1874, died suddenly at his home in Monticello, Ill., from heart disease, May 19, aged 58.

Maude A. Thompson-Miller, M.D. American Medical Missionary College, Chicago, 1902, died from psilosis, at her station in Hunan, China, March 14, after an illness of eight months, aged 24.

Jephtha B. Pettijohn, M.D. Medical College of Indiana, Indianapolis, 1870, committed suicide in his office at Noblesville, Ind., by cutting his throat while despondent, May 17, aged 57.

Maude Miller, M.D. Woman's Medical College of the New York Infirmary, New York City, 1899, died at her home in Greenpoint, Brooklyn, N. Y., May 22, from pneumonia, aged 30.

Frank P. Frisbee, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1881, died at his home in Alden, Iowa, May 20, from hypertrophy of the liver and spleen, after a long illness.

Edward D. L. Parker, M.D. Ohio, 1867, for many years a practitioner of Providence, R. I., died at his summer home in Nayatt, R. I., May 13, from angina pectoris, aged 62.

John H. Rippey, M.D. Rush Medical College, Chicago, 1891, of Kingsley, Iowa, died at La Junta, Colo., May 15, from consumption, after a long illness.

Ellis M. Kessinger, M.D. Hospital College of Medicine, Louisville, 1891, died at his home in Sandborn, Ind., after a long illness, May 21, aged 47.

Richard L. Tydings, M.D. Hospital College of Medicine, Louisville, 1882, died at his home in Jefferson County, Ky., May 19, after a short illness.

William A. Laflin, M.D. Rush Medical College, Chicago, 1867, died at Clearwater, Neb., March 22, from pneumonia, after an illness of one week, aged 67.

Marion Crowell, M.D. Macon (Ga.) 1858, died at his home in Solgohachie, Ark., April 23, from senile debility, after an illness of four days, aged 75.

William H. Brown, M.D. Illinois, 1893, of Butler, Pa., died at his parents' home in Brownsdale, Pa., May 21, after a long illness, aged 42.

Horace F. Webster, M.D. Bellevue Hospital Medical College, New York City, 1883, died at his home in Harrison Valley, Pa., May 2, aged 45.

George W. Blend, M.D. Eclectic Medical Society, N. Y., 1874, died suddenly at his home in Oneonta, N. Y., May 22, aged 77.

Francis D. Gridley, M.D. Philadelphia, 1866, died at his home in Binghamton, N. Y., May 19, after a short illness, aged 71.

Edward I. J. Wortham, M.D. Kentucky School of Medicine, Louisville, 1859, died at his home in Hot Springs, Ark., May 23.

Henry Biggs, M.D. Memphis (Tenn.) Medical College, 1849, died at his home in Grand Junction, Tenn., May 16, aged 83.

John Smithwick, M.D. Albany (N. Y.) Medical College, 1869, of Sharon, Mass., died at the town farm, May 21, aged 66.

Lon D. Hockett, M.D. Cincinnati, 1881, died at his home in Whittier, Cal., May 14, after a long illness, aged 50.

Deaths Abroad.

S. von Basch, M.D., professor of experimental pathology at Vienna and author of numerous works on the physiology and pathology of the circulation, on dysentery, innervation of the uterus, histology of the intestines, etc., and inventor of a sphygmomanometer, died at Vienna, May 1, aged 68. He accompanied Maximilian to Mexico in 1865 as his body physician, but returned to Vienna after his execution.

T. Bornhaupt, M.D., professor of surgery at Kiev, died there March 9, aged 63. He had published a number of important works on surgical subjects, the latest being a monograph on surgical affections of the hip joint and thigh, which forms part of the Russian work, "Russian Surgery," now in press.

Miscellany

CLIPPINGS FROM LAY EXCHANGES.

BACTERIOLOGIC SYMPTOMS.

"Professor ——— is at the hospital. . . . He had a tooth pulled and inflammation developed in the jaw, with bacteriologic symptoms."—*Minneapolis Journal.*

ANTONIO'S RUBBER TUBES.

"A peculiar and extremely delicate . . . operation has been performed . . . to save the life of Antonio ———, whose stomach was partially torn out by a dynamite explosion. Coils of rubber tubing were inserted in place of his injured intestines."—*Boston Evening Herald,* Nov. 29, 1904.

THE NEW PATHOLOGY.

"En route there he became ill with pulmonary peritonitis."—*Cincinnati Enquirer,* Dec. 29, 1904.

"Dr. ——— . . . died suddenly of pleurisy of the brain, at his late residence. . . . —*Cincinnati Enquirer,* Nov. 9, 1904.

"She had a stricture of the esophagus or 'swallow,' and . . . she was in fact dying of bodily starvation."—*Charleston* (W. Va.) *Advocate,* April 6, 1905.

"Mr. ——'s death was due to sorosis of the liver."—*Pittsburg Commercial Gazette,* Sept. 19, 1904.

A DOUBLE-BACK-ACTION SNEEZE.

"John ——— sneezed so hard to-day that he doubled himself up and has not straightened up yet. Two doctors have been with him since the sneeze was let loose. . . . He sneezed hard, bending his head to relieve the tension. . . . When he tried to straighten up he could not. . . . The doctors say that the spasm of the diapleragne resulting from the sneeze caused the vertebrae to snap, but they hope to be able to straighten him out again."—*St. Paul* (Minn.) *Pioneer Press,* Dec. 11, 1904.

BONAFIDE BONIFICATION OF BONE.

"Rev. —— . . . is dead of a peculiar disease—ossification of the tissues of the bone. Two operations were performed . . . but blood poisoning had set in and death followed last evening."—*Philadelphia Evening Bulletin,* April 20, 1905.

"May Cripple—Ossification of Bone Threatened as Result of Term in Prison.—Washington, May 18. An affidavit of a New York physician stated that Mrs. —— is suffering with rheumatism of the knee and is threatened with ossification of the bone."—*Chicago Record-Herald,* May 19, 1905.

DIAGNOSIS ALONE WORTH THE MONEY.

"On examination I found an indurated condition of the entire cervical region producing an external pressure on the medulla oblongata, creating an inflammation in the fourth ventricle, extending along the longitudinal fissure, corpus callosum and its peduncles, lamina cinerea, olfactory tract, fissure of sylvius and the anterior perforated space, involving secondarily the optic commissure, tuber cinereum, infundibulum, pituitary body, corpora albicantia, posterior perforated space and the cruri cerebri; hence the incoordinations of the muscular system, loss of speech, locomotion and ptosis of the eyelid after an attack of blinding headache." Case report in osteopathic advertisement, *Chicago Evening Journal.*

Queries and Minor Notes

NORMAL SALT SOLUTION.

LAS ANIMAS, COLO., May 27, 1905.

To the Editor: Please answer the following questions through the columns of THE JOURNAL: 1. What is a "normal salt solution"? 2. What is a standard up-to-date work on typhoid fever?

X. Y.

ANSWER.—1. Normal salt solution is a .6 per cent. solution of sodium chlorid in sterilized water. 2. Every good text-book on practice covers the subject of typhoid fever thoroughly. Many monographs have been written on this subject, and one of the best is that entitled "Typhoid and Typhus Fevers" by Curschmann of Leipsic, edited by Osler, in Nothnagel's Encyclopedia of Practical Medicine. This work is published by W. B. Saunders & Co., Philadelphia; price $5.00.

VARICOSE VEINS.

——, COLO, May 25, 1905.

To the Editor:—Please give me name and address of Chicago surgeons who are authorities on the subject of varicose veins of the lower limbs. 2. Please inform me also whether any treatise on this condition can be obtained, other than the articles found in the general works on surgery.

B. T. W.

ANSWER.—1. It would be invidious to mention names here, as all first-class surgeons are presumed to be authorities on this subject. 2. We know of no work on varicose veins published in book form, but we refer you to the following articles which have appeared in leading medical journals: "Surgical Treatment of Varicose Veins," by C. H. Mayo, Rochester, Minn., *St. Paul Medical Journal,* September 1904; abstracted in THE JOURNAL, September 24, 1904, p. 917. "The Remote Results of Operations for Varicose Veins of the Lower Extremities," by Robert Kennedy, *British Medical Journal,* Oct. 29, 1904; abstracted in THE JOURNAL, Nov. 19, 1904, p. 1584. "Local Treatment for Varicose Ulcers," by F. Fletcher, *Columbus Medical Journal,* March, 1904; abstracted in THE JOURNAL, April 16, 1904, p. 1049. "Nature and Treatment of Varicose Veins," by G. R. Johnson, *Medical Times,* New York, May, 1904. "Some Further Points Relating to Varicose Veins of the Lower Limbs," by Sir William H. Bennett, *The Lancet,* Nov. 22, 1902; abstracted in THE JOURNAL, Dec. 13, 1902, p. 1554. "Operative Treatment of Varicose Veins," by J. B. Blake, *Boston Medical and Surgical Journal,* Sept. 25, 1902; abstracted in THE JOURNAL, Oct. 11, 1902, p. 936.

State Boards of Registration

COMING EXAMINATIONS.

Minnesota State Board of Medical Examiners, Old State Capitol Building, St. Paul, Minn., June 6-8. Secretary, C. J. Ringnell, M.D., Minneapolis.

Board of Medical Examiners of Wyoming, State Capitol, Cheyenne, June 7. Secretary, S. B. Miller, M.D., Laramie.

Michigan State Board of Registration in Medicine, The Capitol, Lansing, June 13. Secretary, B. D. Harison, M.D., Sault Ste. Marie.

State Board of Medical Registration and Examination of Ohio, Cleveland, Columbus and Cincinnati, June 13-15. Secretary, Frank Winders, M.D., Columbus.

Board Representing the President and Fellows of the Medical Society of Delaware, Dover, June 20-22. Board Representing the Homeopathic Medical Society of Delaware, Wilmington, June 20-22. Secretary of the Medical Council of Delaware, P. W. Tomlinson, M.D., Wilmington.

State Board of Medical Examiners of New Jersey, Trenton, June 20-21. Secretary, E. L. B. Godfrey, M.D., Camden.

Medical Examining Board of Virginia, Richmond, June 20-24. Secretary, R. S. Martin, M.D., Stuart.

Board of Medical Examiners of Maryland, Baltimore, June 21-24. Secretary, J. McP. Scott, M.D., Hagerstown.

Medical Council of Pennsylvania, Philadelphia and Pittsburg, June 27. Secretary of the Medical Council, H. C. Shaeffer, M.D., Harrisburg.

Board of Medical Examiners, Central District, I. T., South McAlester, I. T., July 3. Secretary, B. W. Caldwell, Hugo.

Board of Medical Examiners of Arizona, Phoenix, Ariz., July 3-4. Secretary, A. Martin, Phoenix.

Utah State Medical Examiners, Salt Lake City, Utah, July 3-4. Secretary, R. W. Fisher, Salt Lake City.

North Dakota State Medical Examining Board, Grand Forks, July 5. Secretary, H. M. Wheeler, Grand Forks.

State Medical Examining Board of Washington, Seattle, Wash., July 5. Secretary, C. W. Sharples, Seattle.

State Medical Examining Boards of the Regents, State House, Concord, N. H., July 7-8. Regent, H. C. Morrison, Concord.

State Medical Board of the Arkansas Medical Society, Little Rock, July 11. Secretary, J. P. Runyan, Little Rock.

Rhode Island State Board of Health, State House at Providence, commencing at 9 a. m., July 11. Secretary, G. T. Swarts, State House, Providence.

Wisconsin Board of Medical Examiners, Park Hotel, Madison, Wis., July 11. Secretary, F. A. Forsbeck, Milwaukee.

State of Connecticut Medical Examining Board, City Hall, New Haven, Conn., July 11-12. Secretary, C. A. Tuttle, New Haven.

Maine Board of Registration of Medicine, State House, Augusta, Maine, July 11-12. Secretary, Wm. J. Maybury, Saco.

Vermont State Board of Medical Registration, Y. M. C. A. Hall, Burlington, Vt., July 11-12-13. Secretary, W. Scott May, Underhill.

Kansas State Board of Medical Registration and Examiners, State House, Topeka, Kan., July 12-13. Secretary, G. F. Johnston, Lakin.

South Dakota Board of Medical Examiners, Sioux Falls, S. Dak., July 12-13. Secretary, H. E. McNutt, Aberdeen.

Board of Medical Supervisors, Washington, D. C., July 13. Secretary, Wm. C. Woodward, Health Department, Washington.

California State Board of Medical Examiners, San Francisco and Los Angeles, Cal., July 19. Secretary, C. L. Tisdale, San Francisco.

District of Columbia April Report.—Dr. W. Woodward, secretary of the Board of Medical Supervisors of the District of Columbia, reports the oral and written examination held at Washington, April 13-16, 1905. The number of subjects examined in was 17; total number of written questions, 80; percentage required to pass, 75. The total number of persons examined was 10, of whom 5 passed and 5 failed. The following colleges were represented:

College.	Year Grad.	Per. Cent.
PASSED.		
George Washington University	(1905)	77.250
Columbian University	(1904)	83.031
Georgetown University	(1904)	78.594
Howard University	(1904)	80.688
Johns Hopkins University	(1902)	80.656
FAILED.		
College of P. & S., Chicago	(1904)	53.688
George Washington University	(1904)	72.219
Howard University*	(1904) 63.656; (1903)	56.688
University of Maryland*	(1904)	61.406

* Second examination.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, for the week ending May 27, 1905:

Torney, George H., deputy surgeon general, ordered, in addition to present duties at Army General Hospital, Presidio of San Francisco, to take charge of the chief surgeon's office, department of California, during the absence of the chief surgeon on leave.

Girard, Jos. B., asst.-surgeon general, relieved from duty in Philippines division, to proceed by first available transport to San Francisco, and on arrival there to report to the military secretary of the Army for orders.

Byrne, Chas. B., asst.-surgeon general, relieved from duty as chief surgeon of the department of Missouri, and ordered to Manila, P. I., for duty as chief surgeon, Philippines division.

Truby, Willard F., asst.-surgeon, relieved from duty at Fort Preble, Me., and ordered to Fort Niagara, N. Y., for duty.

Jones, Percy L., asst.-surgeon, relieved from duty at Fort Monroe, Va., and ordered to Fort Preble, Me., for duty.

Shimer, Ira A., asst.-surgeon, relieved from duty at Fort Niagara, N. Y., and ordered to report in person to Secretary of War for further orders.

Mearns, E. A., surgeon, ordered to proceed from Washington, where on leave, to Fort Sill, O. T., to accompany First Squadron Eighth Cavalry to Manila, P. I., and on arrival to report to commanding general, Philippines Division, for assignment to duty.

Bispham, Wm. N., asst.-surgeon, reports as in temporary charge of chief surgeon's office, Department of Colorado, during the absence of chief surgeon on inspection duty.

Comegys, Edward T., deputy surgeon general, retired from active service at his own request, on account of thirty years' service, to take effect July 1, 1905.

Collins, C. C., asst.-surgeon, granted three months' leave of absence, to take effect when relieved from duty in Philippine Islands.

Brooke, Roger, Jr., asst.-surgeon, granted three months' leave of absence, to take effect about Aug. 1, 1905.

Borden, Wm. C., surgeon, ordered to New York City, to consult with architects regarding plans for the new Army General Hospital to be constructed in Washington.

Bushnell, Geo. E., surgeon, granted 15 days' leave of absence.

McAndrew, P. H., asst.-surgeon, reports at Arcadia rifle range for temporary duty.

Richards, R. L., asst.-surgeon, having recently arrived from Manila, P. I., will report at Fort Mason, Cal., for temporary duty during the absence of Assistant-Surgeon Murtagh, and in addition to this duty, he will act as attending surgeon and examiner of recruits at San Francisco, Cal.

Murtagh, John A., asst.-surgeon, ordered to accompany Second squadron 13th Cavalry from Presidio of San Francisco, Cal., to Fort Myer, Va., on completion of which he will return to his proper station.

Craig, Charles F., asst.-surgeon, ordered to accompany First Squadron 13th Cavalry from Presidio of San Francisco, Cal., to Fort Riley, Kans., on completion of which he will return to the U. S. Army Transport *"Logan."*

Brooks, Wm. H., asst.-surgeon, granted two months' and fifteen days' leave of absence.

McCulloch, C. C., Jr., surgeon, detailed as a member of board of medical officers to meet at West Point, N. Y., for examination of cadets' graduating class and other cadets, instead of Assistant-Surgeon Ekwurzel.

Hutton, Paul C., asst.-surgeon, leave of absence further extended 14 days.

Webb, Walter D., asst.-surgeon, granted three months' leave of absence.

McAlister, John A., dental surgeon, ordered to Fort Rosecrans, Cal., for temporary duty.

Dade, Waller H., contract surgeon, relieved from duty at Fort D. A. Russell, Wyo., and ordered to Fort DuChesne, Utah, for duty.

McCall, James H., contract surgeon, returned to duty at Fort Smallwood, Md., from leave of absence.

Coffee, Albion McD., contract surgeon, relieved from duty at Fort Worden, Wash., and from temporary duty at Fort Lawton, Wash., and ordered to Fort Davis, Alaska, for duty.

Kelly, John P., contract surgeon, granted leave of absence for four months, to take effect July 7.

Ware, William H., dental surgeon, left Fort Huachuca, Ariz., for temporary duty at Fort Grant, Ariz.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending June 27, 1905:

Anderson, F., medical inspector, ordered to report to the commanding officer, Marine Barracks, Washington, D. C., for duty at those barracks.

Cordeiro, F. J. B., surgeon, ordered to the *Yankee*, sailing from New York about June 7.

Wieber, F. W. B., surgeon, detached from the *Prairie* when put out of commission, and ordered home to wait orders.

Gatewood, J. D., surgeon, detached from the *Yankee*, and ordered home to wait orders.

Stokes, C. F., surgeon, ordered to additional duty as a member of the Anatomical Board of the District of Columbia.

Warner, R. A., asst.-surgeon, ordered to the Naval Hospital, Philadelphia.

Stainaker, P. R., asst.-surgeon, ordered to the Naval Hospital, New York.

Pugh, W. S., Jr., asst.-surgeon, detached from the *Prairie*, and ordered to the Naval Station, Guantanamo, Cuba, with additional duty on the *Monongahela*, sailing from New York, about June 2.

Grayson, C. T., asst.-surgeon, detached from the Marine Barracks, Washington, D. C., and ordered to the *Maryland*.

Hoyt, R. E., asst.-surgeon, detached from the *Texas*, and ordered home to wait orders.

Brown, H. L., asst.-surgeon, detached from the Naval Station, Guantanamo, Cuba, and ordered to the *Texas*.

Shaw, H., asst.-surgeon, detached from the *Yankee* and ordered home to wait orders.

Zalesky, W. J., asst.-surgeon, detached from the Naval Academy and ordered to the *Yankee*, sailing from New York June 7.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service for the seven days ending May 24, 1905:

Stoner, G. W., surgeon, three days' leave of absence from May 17, 1905, under Paragraph 189 of the Regulations.

Mathewson, H. S., P. A. surgeon, granted leave of absence for two months from June 16, 1905.

McClintic, T. B., P. A. surgeon, to proceed to Berkeley Springs and other points in West Virginia for special temporary duty.

Spratt, R. D., asst.-surgeon, to proceed to Cleveland, Ohio, and assume temporary charge of the station during the absence on leave of P. A. Surgeon H. S. Mathewson.

Long, H. D., asst.-surgeon, to proceed to Ellis Island, N. Y., and report to Surgeon G. W. Stoner for duty.

Olsen, E. T., asst.-surgeon, to proceed to Ellis Island, New York, and report to Surgeon G. W. Stoner for duty.

Miranda, R. U. L., acting asst.-surgeon, granted leave of absence for thirty days from June 1.

Wakefield, H. C., acting asst.-surgeon, granted leave of absence for ten days from May 27.

Roehrig, A. M., pharmacist, granted leave of absence for 5 days from May 19, 1905, under paragraph 191 of the regulations.

BOARD CONVENED.

Board to meet at San Francisco, May 19, 1905, for the physical examination of an officer of the Revenue Cutter Service. Detail for the board: Surgeon G. M. Magruder, chairman; P. A. Surgeon D. H. Currie, recorder.

APPOINTMENTS.

Dr. Henry D. Long of Pennsylvania, and Dr. Egil T. Olsen, of Illinois, commissioned (recess) as assistant surgeons in the Public Health and Marine-Hospital Service.

Dr. Charles E. Fisher appointed acting assistant surgeon in the Public Health and Marine-Hospital Service, for duty at Toledo, Ohio.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever and plague, have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from May 20 to May 26, 1905:

SMALLPOX—UNITED STATES.

District of Columbia: Washington, May 13-20, 2 cases.
Florida: Jacksonville, May 13-20, 2 cases.
Illinois: Chicago, May 13-20, 6 cases, 2 deaths; Galesburg, April 13-20, 1 case.
Kentucky: Covington, May 13-20, 9 cases.
Louisiana: New Orleans, May 13-20, 4 cases imported.
Massachusetts: Lowell, May 13-20, 2 cases.
Michigan: Ann Arbor, April 29-May 6, 1 case.
Missouri: St. Joseph, May 6-20, 40 cases; St. Louis, May 13-20, 5 cases.
New Hampshire: Nashua, May 13-20, 2 cases.
New York: Kingston, May 13-20, 1 case; New York, May 13-20, 1 case 1 death.

Ohio: Cincinnati, May 5-19, 7 cases; Toledo, May 6-13, 1 case.
Pennsylvania: Altoona, May 13-20, 1 imported case, York, May 13-20, 12 cases.
South Carolina: Greenville, May 13-20, 4 cases, 2 deaths.
Tennessee: Memphis, May 13-20, 1 case; Nashville, May 13-20, 4 cases.
Wisconsin: La Crosse, May 13-20, 1 case; Milwaukee, May 13-20, 2 cases.

SMALLPOX—FOREIGN.

China: Hong Kong, April 1-8, 7 cases, 3 deaths.
France: Paris, April 29-May 6, 21 cases 1 death.
Great Britain: Bradford, April 22-May 6, 12 cases; Toledo, May 6-13, 1 case; London, April 29-May 6, 4 cases.
India: Bombay, April 17-25, 76 deaths.
Italy: Catania, May 6-11, 8 deaths; Palermo, April 22-29, 8 cases.
Malta: April 22-29, 1 death.
Russia: Moscow, April 15-29, 10 cases, 5 deaths.
Spain: Barcelona, April 20-30, 6 deaths.
West Indies: Barbadoes, May 9, 1 case among laborers for canal zone, probably imported; Grenada, April 20-May 4, 2 cases.

YELLOW FEVER.

British Honduras: Belize, May 24, 2 cases, 1 death.
Honduras, Puerto Cortez, May 25, 4 cases, 1 death.
Mexico: Tierra Blanca, May 7-13, 1 case, 1 death.
Panama: Panama, Jan. 1-May 13, 61 cases, 22 deaths.

PLAGUE.

Arabia: Aden, April 14-28, 19 cases, 8 deaths.
Australia: New Castle, April 13, 4 cases 1 death.
Chile: Santiago, April 16-28, 2 cases.
China: Hongkong, April 1-8, 3 cases, 3 deaths.
India: General, April 1-8, 59,227 cases, 52,841 deaths; Bombay, April 18-25, 1,018 deaths.
Japan: Formosa, March 1-31, 284 deaths; April 1-20, 272 deaths.
Straits Settlements: Singapore, April 1-15, 5 deaths.

Medical Organization

Kentucky.

LAWRENCE COUNTY MEDICAL SOCIETY.—On May 13 Dr. James W. Kincaid, Catlettsburg, and Lester Keller, Ironton, Ohio, met physicians of the county at Ashland and assisted in the organization of a county society. Dr. Andrew J. Hillman, Glenwood, was elected president; Dr. John J. Gambill, Jr., Martha, vice-president; Dr. J. C. Bussey, Louisa, secretary, and Dr. Morton G. Watson, Louisa, treasurer.

Ohio.

AUGLAIZE COUNTY MEDICAL SOCIETY.—This society was organized at Wapakoneta, May 25, with 29 charter members. The following officers were elected: President, Dr. Charles H. Phelps, St. Mary's; vice-president, Dr. Henry E. Fledderjohann, New Knoxville; secretary, Dr. C. Ludwig Mueller, Wapakoneta; treasurer, Dr. Franklin C. Hunter, Wapakoneta, and censors, Drs. Simpson N. Ekermeyer, New Bremen; Charles C. Berlin, Wapakoneta, and Bert E. Thomas, St. Mary's.

Pennsylvania.

LUZERNE COUNTY MEDICAL SOCIETY.—At a special meeting held in Wilkesbarre, May 24, Dr. J. N. McCormack delivered an address on organization.

CLEARFIELD COUNTY MEDICAL ASSOCIATION.—At the meeting of the society May 15, at Clearfield, an address on organization was made by Dr. J. N. McCormack.

CLINTON COUNTY MEDICAL ASSOCIATION.—On May 16 this association gave a banquet at Lock Haven in honor of Dr. J. N. McCormack, who addressed the meeting on the need of closer organization.

NORTHAMPTON COUNTY MEDICAL SOCIETY.—At the meeting in Pen Argyle, May 21, Dr. J. N. McCormack addressed the society on the necessity of thorough organization and unity of the medical profession.

NORTHUMBERLAND COUNTY MEDICAL SOCIETY.—Dr. J. N. McCormack addressed the members of this society, and also the members of Montour County Medical Society at Sunbury, May 17. His object was organization.

SNYDER COUNTY MEDICAL SOCIETY.—The physicians of Snyder County met at Middleburg, May 18, and after a full discussion of the subject of organization by Drs. Luther B. Kline, Catawissa, censor for the district; Dr. G. A. Stack, president of the Montour County Society, Dr. J. N. McCormack of Kentucky and others, a promising society was formed under the standard constitution and by-laws. The following officers were elected: President, Dr. Benjamin F. Beale, McKee's Half Falls; vice-presidents, Drs. William W. Longacre, Mount Pleasant Mills, and Charles G. Smith, Beaver Springs; secretary and reporter, Dr. A. J. Hermann, Middleburg; treasurer, Dr. Frank J. Waynesellet, Selins Grove, and censors, Drs. H. M. Nipple, Selins Grove; B. F. Waynesellet, Selins Grove; John O. Wagner, Beaver Springs, and Marand Rothrock, Mount Pleasant Mills.

A CALL FOR ORGANIZATION.—Dr. J. N. McCormack of Bowling Green, Ky., chairman of the Organization Committee of the American Medical Association, addressed the Medical Society of Philadelphia, Chester and Delaware Counties in the College of Physicians, May 26. Dr. McCormack urged the necessity of organization among physicians all over the United States. He said that the physicians of our own state received less compensation for their services than in any other section of the country. Things have come to such a pass in the medical profession, he said, that there is a large class of ill-supported and hence ill-informed and ignorant physicians, whose antiquated methods do their communities and the profession at large more harm than good. The reason is that physicians do not get paid for their services. They work harder than any other class of men, and yet even well-to-do people employ them without even thinking it necessary to compensate them. There should be up-to-date organizations all over the country, particularly in this state, to lift up to the light struggling physicians who do not now earn enough to support their families or even to obtain the necessary standard literature. In Kentucky organization has been effected to make a uniform fee schedule.

Virginia.

MEDICAL SOCIETY OF NORTHERN VIRGINIA.—At a meeting held in Alexandria, May 17, this society was organized with the following officers: Dr. Robert M. Slaughter, Alexandria, president; Drs. George Tully Vaughan, U. S. P. H. and M.-H. Service, Washington, D. C., and Matthew W. O'Brien, Alexandria, vice-presidents; and Dr. A. Avery Rittenour, Alexandria, secretary and treasurer.

Society Proceedings

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Portland, Ore., July 11-14, 1905.

American Laryn., Rhin. and Otol. Society, Boston, June 5-7.
American Orthopedic Association, Boston, June 6-8.
Indiana State Medical Association, West Baden, June 7-9.
Maine Medical Association, Portland, June 7-9.
Wisconsin State Medical Society, La Crosse, June 8.
Amer. Assn. of Genito-Urinary Surgeons, Montreal, June 13-14.
Massachusetts Medical Society, Boston, June 13-14.
American Pediatric Society, Lake George, N. Y., June 19-21.
Medical Society of New Jersey, West End, June 20-22.
Indian Territory Medical Association, Tulsa, June 20-22.
Michigan State Medical Society, Petoskey, June 28-30.
American Climatological Association, Detroit, Mich., June 29-30
American Surgical Association, San Francisco, Cal., July 5-7.
South Dakota State Medical Association, Deadwood, July 5-7.
Amer. Assn. of Life Ins. Exam. Surgeons, Portland, Ore., July 10.
American Medical Editors' Assn., Portland, Oreg., July 10.
Oklahoma State Medical Association, Guthrie, July 10-11.
American Urological Association, Portland, Ore., July 12-13.

ASSOCIATION OF AMERICAN PHYSICIANS.

Twentieth Annual Meeting, held at Washington, D. C., May 16-17, 1905.

(Concluded from page 1704.)

Some Phases of the Neurotic Heart.

DR. BEVERLY ROBINSON, New York, divides these cases into four groups: 1, those accompanied by general evidences of neurasthenia; 2, cases of organic change in the heart; 3, cases of involvement of the stomach, bowels, or other organs, the heart condition being secondary; 4, cases in which various concomitant troubles are as much the effect as the cause of the cardiac lesion. Cardiac dilatation and hypertrophy may be of neurotic origin and murmurs may be produced in such condition. Organic lesion must be carefully excluded before this diagnosis is made. Treatment is apt to be uncertain and yield only temporary results. In cases of predominant neurosal element, the Nauheim treatment is often beneficial. Robinson emphasized the following points: 1, slight enlargement of the heart may be due to nervous disorders of that organ; 2, there develops a secondary anemia which remains stationary despite treatment directed toward its cure; 3, the absolute or relative uselessness of digitalis in this condition is an important point; 4, the heart muscle, which at times

becomes involved to such an extent as to permit of slight dilatation, may be improved in nutrition in some cases until functional recovery is attained.

SECOND SESSION.

Case of Pneumococcus Sepsis.

DR. J. S. THACHER, New York, cited a case notable for the intensity and rapidity of onset of endocarditis and meningitis. The patient was ill only 19 days. He passed through a rather typical course of croupous pneumonia, the lung being almost entirely clear on the twelfth day. On the fourteenth day signs of fluid in the right chest developed and three days later, two days before death, the first evidence of cardiac trouble became manifest, a diastolic murmur appearing at the apex. The temperature was then 100 degrees. Multiple murmurs afterward developed. On the day preceding death the neck stiffened, headache was severe, and Kernig's sign was present. Lumbar puncture showed a turbid fluid from which a pure culture of the pneumococcus was made; similar cultures were obtained from the pus in the pleura and from the blood.

Six Cases of Perforation in Typhoid Fever in Children.

DR. J. P. CROZER GRIFFITH, Philadelphia, reported these cases because (1) the occurrence of typhoid fever and perforation in childhood is unusual; (2) the symptoms of perforation in children offer difficulties in diagnosis even greater than in the case of adults. In children there is less apt to be collapse, severe abdominal pain, uncontrollable vomiting, abdominal tenderness and abdominal distention.

DR. A. JACOBI, New York, said the difficulty in diagnosing perforation in children was rendered greater by the fact that now and then perforation occurs without diarrhea having been present at any time during the course of the disease. Diagnosis of perforation is not easy in any case and in some is impossible.

Hematemesis from Gastric Ulcer.

DR. W. G. THOMPSON, New York, gave data based on the study of 200 cases. One in 4.8 cases died, but this may not be accurate, as patients who leave the hospital as cured or improved may later die of hemorrhage, though not traced. Regarding operation for this symptom, Thompson believes it should be resorted to oftener than it is. Three indications call for operative intervention: 1, dangerous hemorrhage; 2, recurring hemorrhage not yielding to medical treatment; 3, adhesions to neighboring viscera, whether from the bleeding or other ulcer. The difficulties of accurate diagnosis are proved by the findings of operation and by examination of the stomach contents. Of 20 cases operated on 5 were found to have conditions entirely different from gastric ulcer; several personal cases had hematemesis but no ulcer. The analysis of the gastric contents is essentially no aid in diagnosis; a single examination is absolutely worthless and repeated passage of the tube is dangerous. In several cases unexpected lesions have been found at operation, another indication for early operation, even for diagnosis in some cases. As to the etiology of gastric ulcer, an interesting point is the much greater age of males in which it occurs; few males below 35 have ulcers, while the larger number of affected females are between 20 and 30. Whether of great significance or not, a large proportion of males suffering from gastric ulcer (one-fourth) were workers with metals.

DISCUSSION.

DR. F. P. KINNICUTT, Boston, said that in advising operative procedure one must bear in mind how frequently it is difficult to locate the lesions in the stomach, even at autopsy. They may be small and found only after the most diligent search; with the ordinary surgical incision they may easily be overlooked. A second point is the frequency of cases in which death from hemorrhage appears imminent, but in which the bleeding finally ceases and the patient lives many years.

DR. S. SOLIS COHEN, Philadelphia, said that relative to the recurrence of gastric ulcer we have as yet no positive data of cases in which operation has been performed to show how often new ulcers occur thereafter. He cited the case of an old man who, without symptoms referable to ulcer, suddenly had profuse gastric hemorrhage. Surgeons called in consultation considered him too weak for operation. When strength was regained there appeared to be no need for operation. Hemorrhage again occurred and the man died. Autopsy showed 40 or more small ulcers, 20 or 30 of which were healed. These multiple ulcers had been forming for years without causing symptoms. A second instance was that of a young lady, who, 17 years ago had severe gastric hemorrhage and recovered. She now has symptoms of ulcer but no hemorrhage, and refuses operation. There is still a great deal to be said on both sides of the question of operating for ulcer. In one case with gall-bladder symptoms operation revealed an ulcer of the stomach just on the point of perforation. The pain which led to operation appeared to be due to adhesions between the gall bladder and an old gastric ulcer.

Dr. B. W. Sippy, Chicago, mentioned the case of a girl who had repeated hemorrhages, the hemoglobin being 20 per cent. Surgeons hesitated, and she finally recovered without operation. The danger of operation in such cases is probably not so great as in anemias of slow development, but nearly all operated cases die. It is difficult to say if operation is justified.

Dr. J. H. Musser, Philadelphia, said it is important to remember cirrhosis of the liver as a cause of hematemesis. In cases simulating ulcer, but in which perigastric or periduodenal adhesions to the gall bladder are a possibility, a previous history of typhoid is an important aid in diagnosis, particularly typhoid of long duration and imperfect convalescence.

The Relations of Certain Stomach Disorders to Diabetes Mellitus.

DR. JOHN S. SAWYER, Cleveland, has for the past five years been treating cases of diabetes mellitus from the standpoint of the stomach rather than the glycemia; his results are quite satisfactory. Of the 19 patients treated, 17 gave a history of previous dyspepsia and had a definite catarrhal condition of the stomach. Lavage of the stomach with solutions of resorcin or with chloroform water gave almost immediate relief from excessive thirst, hunger, and polyuria. In several, cessation of glycosuria also followed improvement in the stomach condition. In a few cases similar results were obtained without lavage, but that expedient was most successful, especially in cases of motor insufficiency and hyperchlorhydria. The known duration of glycosuria was from six weeks to five years. The cases reported show that hunger, thirst, and polyuria are not so dependent on hyperglycemia as is commonly supposed, and that stomach disorders possess a far greater importance than is usually attributed to them. Lavage can be properly carried out only when the patient is in the reclining posture, and means other than gravity are used to cause return of the fluid; constant manipulation of the gastric region should be kept up while the fluid is in the stomach to secure thorough application to the organ and removal of the contents.

DR. JAMES TYSON, Philadelphia, has not noticed in diabetes particular symptoms referable to the stomach. It is possible, however, that the efficiency of Fowler's solution in diabetes may be due to its effect on the stomach functions. It is also possible that the formation of acetone and diacetic acid is due to gastric catarrh.

DR. S. SOLIS-COHEN, Philadelphia, has noticed in a number of cases of chronic glycosuria an increase of excretion of sugar accompany septic condition of the intestines, the increase disappearing when the intestines are made antiseptic.

Clinical Notes on the Use of Nux Vomica, Especially in Certain Forms of Hyperchlorhydria.

DR. J. H. MUSSER, Philadelphia, finds that cases of hyperchlorhydria, especially those secondary to gastric neurasthenia, which do not yield to ordinary treatment often do remarkably well on nux vomica. It must be given in ascending doses and in large quantities. In most cases 60 or more drops three times daily are used, but each individual regulates the point of tolerance. It must be given for long periods of time, usually four or five months. In young subjects the drug can be given in much larger doses than in older patients. Nux vomica and not strychnin must be employed.

Umbilical Hernia as a Little Recognized Source of Abdominal Pain.

DR. D. D. STEWART, Philadelphia, called attention to hernia in the linea alba above the umbilicus as a cause of recurring abdominal pain and various dyspeptic symptoms, the cause of which is otherwise regarded as obscure. The hernia is commonly not much larger than a split pea, but may be the size of half a walnut.

Stone in the Kidney and Certain Conditions Simulating It.

Dr. D. D. STEWART, Philadelphia, described several cases, some of renal calculus with unusual symptoms or quiescent as regards the kidneys, others of a different condition but simulating calculus. In some of the former the diagnosis was obscure until repeated examinations of the urine revealed small quantities of blood. At least 4 of the cases of calculus might have been diagnosed intestinal involvement, so clearly did the symptoms point to that source. In one case severe gastralgia and enteralgia were the only symptoms; another had been treated for dyspepsia; 2 more were supposed cases of bowel trouble. One case diagnosed stone was found to be stricture of the ureter.

DISCUSSION.

DR. I. N. DANFORTH, Chicago, exhibited 3 specimens from a girl of 25. All were calculi, one from the bladder weighing 180 gm. (6 ounces), another from the left kidney, and a third from the right kidney. The two first were removed during life, the last postmortem. No acute pain was ever felt in either kidney.

DR. JAMES TYSON, Philadelphia, has seen cases simulating stone in the kidney, some of them operated on and no stone found. In the last two operations done for him in which no stone was found, a condition which might explain the symptoms was what might be called capsulitis. The capsule was thickened, closely adherent and depressed. Decapsulation resulted in recovery in both instances. The symptoms had been those of tenderness over the kidneys and remittent or intermittent catarrhal urine. He advises examination for this condition when operation is performed.

DR. T. FORSCHHEIMER, Cincinnati, has seen 3 cases of the type described by Dr. Tyson. Urinary analysis gave no evidence of a calculus, but the symptoms pointed to that condition. There was no inflammation of the perirenal fat, only of the capsule. All 3 patients recovered.

DR. FRANK BILLINGS, Chicago, speaking of the significance of microscopic blood in the urine, said it was present in almost all cases of acute appendicitis; hence with a pain in the right side of the belly the blood might mean appendicitis or renal calculus. In the diagnosis of stone in the kidney, the Röntgen-ray is a disappointment nearly as frequently as it is an aid. This is especially true if the operator is not a physician.

Study of Abdominal Tumors.

DR. R. C. CABOT, Boston, presented a statistical study of 4,786 tumors collected from the records of the Massachusetts General Hospital. The 5 highest in point of frequency were tumors of the liver, uterus, ovary, kidney, and hernia. Among the points of general interest is the slow growth of cancer of the intestine and the condition found in tuberculous peritonitis. In only 2 of 33 cases of the latter condition was the omentum rolled up to produce a tumor; in the others the swelling was due to matted intestines. Another point was that the lower part of the abdomen was involved as frequently as was the upper. Fever was not an infrequent symptom of cancer of the liver.

DISCUSSION.

DR. M. H. FUSSELL, Philadelphia, emphasized the point regarding chronicity of carcinoma of the intestine; one case lasted for 12 or 14 months.

DR. W. S. THAYER, Baltimore, spoke of the frequency of fever in cancer of the liver. He mentioned 2 cases of rapidly growing sarcoma of the liver accompanied by fever; in one the diagnosis of typhoid had been made; the other resembled typhoid in all respects except the leucocyte count. Another case, occurring in a nurse, had fever, chills, prostration, anemia and slight jaundice. The liver was smooth and a diagnosis of abscess was made. Autopsy showed an adenocarcinoma.

DR. F. P. KINNICUTT, Boston, said his experience confirmed the infrequency of rolled-up omentum in tuberculous peritonitis.

DR. J. H. MUSSER, Philadelphia, said chronicity is a feature of cancer of the large bowel. In one of his cases a tumor above the sigmoid lasted for more than 18 months. Localization of the lesion is one reason for this comparative benignity.

New Method of Treating Cardiospasm.

DR. B. W. SIPPY, Chicago, demonstrated a method of overcoming cardiospasm which has given excellent results in a patient who for months had to be fed through a tube. The apparatus is a cloth-covered balloon containing a central canal through which is introduced an ordinary esophageal bougie. After the bag is in position it is dilated and the cloth holds it at the place desired.

THIRD SESSION.

Considerations on Proteid Diet, with Especial Reference to the Distribution of Amido-Nitrogen, Diamino-Nitrogen and Monamino-Nitrogen.

DRS. L. F. BARKER and B. A. COHOE, Chicago, spoke of the well-known variations in tolerance of the same individual for different kinds of proteid food, and the consequent desirability of seeking a cause in the chemical constitution of the foods. The distribution of the various forms of nitrogen in articles of proteid diet has not hitherto been investigated; this the writers have done, applying the method of Hausmann as modified by Osborne and Harris, and by Gumbel. The amido-nitrogen, melanoidin-nitrogen, diamino-nitrogen, and monamino-nitrogen have been determined in various cuts of beef, veal and pork, in liver, thymus, in fish and in chicken. Elaborate tables set forth the results of the studies and were explained at length. The proteid molecule is exceedingly complex but the ultimate elements are surprisingly few. From all the work that has been done on the subject, Barker believes the possibility of making synthetically all the albumins is a reasonable supposition. This would give the key to the knowledge of proteid foods. Chemical methods of investigation are an aid, but Barker disclaims any illusion that this is to solve all problems; many conditions and processes may, however, be explained in this manner. For instance, amyloid formation is probably due to the substitution of one form of nitrogen for another. Again in gout, monamino-acids appear in the urine and it may be shown that this form of metabolism is as important in this disease as uric acid metabolism has been supposed to be. In phosphorus poisoning similar metabolic changes are at work, as indicated by experiments.

The Chlorid Exchanges in Three Cases of Chronic Nephritis, with Reference to the Dechloridation Treatment.

DRS. A. O. J. KELLY and C. A. FIFE, Philadelphia, reported 3 cases treated by the dechloridation method, with very marked improvement in one, moderate improvement in a second, and absolutely no effect in a third. The first has anasarca and under a salt-free diet his weight fell from 203 to 139 pounds; later this went to 160 but without the appearance of edema. The third patient was in a desperate condition and Edebohl's operation was performed, but gave no relief. Kelly considers the sodium chlorid content of the urine as of some value in prognosis in cases of nephritis; an increase following a low percentage is a good sign, a decrease is bad. Concerning the mechanism of retained sodium chlorid in the body, Kelly believes the salt is first deposited in the tissues, water is then retained with increase of weight but at first without edema, and finally edema appears. In this connection the changes in circulation have not been sufficiently investigated. A salt-free diet may be of benefit in some cases of nephritis and should be tried; it may be given continuously for some time or at intervals during the course of otherwise intractable cases. A point that demands investigation is whether harm is done by the injection of saline solution, as in cases of toxemia and even in nephritis.

Chlorid Retention in Nephritis.

DR. JOS. L. MILLER, Chicago, presented statistics regarding chlorid retention in 2 cases of acute and 6 of chronic parenchymatous nephritis, one of secondary contracted kidney, one of myocarditis, and 4 normal individuals. Of the 6 kidney cases with edema, all had chlorid retention. Miller considers the retention in nephritis as one of degree only, as retention may be equally great in normal persons; the latter gain in weight, but without the appearance of edema. Retention in moderately severe nephritis is not greater than in the normal individual; in severe cases the impermeability of the kidney to sodium chlorid is greatly increased. Edema is probably partly due to lessened perspiration following increased concentration of the body fluids.

DISCUSSION.

DR. ALFRED STENGEL, Philadelphia, who had charge of 2 of the cases reported by Dr. Kelly, said the improvement in the one case was remarkable. The second gain in weight was evidently due to his improved general health and not fluid accumulation. In the second case an interesting point was that the patient had for some time been given enteroclysis with salt solution and had become worse. Since the work of Dr. Kelly was carried out, Dr. Stengel has been in charge of a man of 36 who had acute nephritis 8 years ago and several attacks since, in whom reduction of sodium chlorid has given good results. The man is a private patient and routine investigation, as in the others, cannot be employed. He has arteriosclerosis with the highest blood pressure Dr. Stengel has ever noted, the systolic reaching 280 mm. of mercury. Headache has been a prominent symptom during his entire trouble. The patient volunteered the information that he has always been an inordinate salt eater. Reduction of salt in his diet has been followed by a remarkable improvement as to the headaches and the blood pressure. Regarding the general value of chlorid retention and excretion, Dr. Stengel says it promises something in the line of a method of determining what the kidneys are doing in individual cases, and hence a help in prognosis. Other methods have proved inadequate for this purpose, albumin being discredited as a guide, and cryoscopy probably being of little value and the method so cumbersome as to be practically unavailable even if it were of value. Hence, chlorid retention constitutes a hopeful line of research, but is not so important as the French consider it.

DR. F. P. KINNICUTT, Boston, said he is giving up the indiscriminate use of salt solution by hypodermoclysis and enteroclysis, and is satisfied that better results are thus obtained.

DR. D. L. EDSALL, Philadelphia, considers sodium chlorid retention possessed of only a limited diagnostic value.

DR. S. J. MELTZER, New York, said the investigations along this line were too loosely carried out as the excretion of sodium chlorid by the intestine and skin was not accurately determined. The only safe point to consider in this question is that sodium chlorid controls osmosis. It is possible that in diabetes there is high osmotic pressure with the abstraction of fluid. The results with diabetics detailed by Dr. Sawyer may have been due to removing chlorids by washing the stomach and thus eliminating the abnormal factor in osmosis; this would appear to account for the lowering of polyuria without reducing the sugar output. Possibly a beneficial effect would be produced by a salt-free diet in diabetes.

DR. R. C. CABOT, Boston, asked if any knowledge we possess indicates that we should discountenance the eating of large amounts of salt by well persons.

DR. A. JACOBI, New York, asked if any one had experience with salt-free food in the treatment of epilepsy.

DR. JOSEPH COLLINS, New York, said that 2 years ago 25 hospital epileptics were put on reduced salt diet with the result of a reduction of 38 per cent. in the frequency and severity of the epileptic attacks. Recently the same method was adopted with 5 dispensary patients; in 4 of them the attacks have been reduced upwards of 50 per cent. A normal individual may eat as much salt as he pleases, just as he may eat anything else or do anything, up to a certain limit. When he is not normal, whether due to disease or what is called old age, he may not eat salt with impunity.

The Toxicity of Bile.

DRS. S. J. MELTZER and W. SALANT, New York, reported the results obtained in experimenting with the various toxic aspects of bile on animals, principally frogs. They found that bile contains 2 elements: first, a depressing or coma-producing substance and, second, an exciting or tetanizing substance. These are antagonistic to each other, and normally the second is covered by the first, resulting in neutralization.

The Nature and Origin of Cholemia and Uremia.

DR. S. J. MELTZER, New York, reviewed the various theories regarding the nature of these conditions. None of the theories explain why the substances they suppose to be present are in the blood for years and produce no attack until a certain time; neither do they show why at times coma, at times convulsions, are produced. Based largely on the results obtained by the experiments detailed in the preceding paper, Meltzer advances a theory to explain cholemia and uremia. When the exciting and depressing substances are in equilibrium, the functions are normal; when they are unstable and there is retention by the kidney or liver, a slight additional accident is sufficient to bring out either the effect of the coma-producing substance or that of the exciting or tetanizing agent.

DR. JAMES EWING, New York, said that if the liver has to do with uremia, these statements support the claim that in uremia the liver is often more affected than is the kidney. He has been studying the livers from a series of cases of uremia and in certain instances has found striking lesions therein, more pronounced than in the kidneys.

DR. S. SOLIS COHEN, Philadelphia, asked if Dr. Meltzer excluded cases of chronic uremia from the list caused in the manner he suggests. These cases appear to be admirably explained by that theory, the explosive attacks during the course of the disease being due to the failure of the kidneys to eliminate one of the involved substances.

DR. JAMES CARROLL, Washington, called attention to the lesions found in the liver in cases of yellow fever, fatty degeneration mainly. If the liver elaborates urea, this function will cease when it is seriously affected, and the products formerly used will be retained. In so-called cases of puerperal eclampsia in which the kidney, as indicated by the urine, is not at fault, excessive fatty or cirrhotic changes have been found in the liver.

Xanthelasma and Chronic Icterus.

DR. T. B. FUTCHER, Baltimore, reported 3 cases of multiple xanthomas in patients with chronic icterus. All 3 were women, the ages ranging from 39 to 42 years. In two, the jaundice was caused by gallstones; in the other, by hypertrophic cirrhosis. In one of the first group, the xanthomas disappeared after operation. The relation between jaundice and xanthomas is shown by the fact that four-fifths of cases of the latter occur in cases of jaundice or in liver affections without jaundice.

Case of Lymphatic Leukemia in a Child of Three Years.

DRS. JOHN LOVETT MORSE and HARRY C. LOW, Boston, cited this case, the duration of which was 5 months. The blood picture, while suggesting leukemia, was not characteristic of that condition during the first 4 months. At the end of 3 months, a lymphnode was removed but histologic examination did not justify the diagnosis of leukemia, the appearance being more suggestive of sarcoma. At the end of 4½ months, a node exhibited typical hyperplastic changes, and the blood during the last month was that of lymphatic leukemia. The atypic blood and lymphnode pictures during the early months are the most important features of the case.

DISCUSSION.

DR. T. FORSCHHEIMER, Cincinnati, mentioned a case of leukemia occurring in a child of 8 months, death ensuing in 10 weeks. The age of the child, the rapidity of the course, and the marked lymphemia were the prominent features. The leucocyte count reached 151,000, with 99.6 per cent. of small lymphocytes.

DR. L. F. BARKER, Chicago, asked if there is any evidence that the lymphocytes in the blood in these cases are derived from the lymphnodes. A view now gaining ground is that proliferation of lymphoid cells in the spleen and lymphnodes does not necessarily give rise to an increase of similar cells in the blood as these organs can expand and retain the newly-formed cells. On the other hand, if the marrow cells proliferate, the capacity of that tissue is soon reached, and the excess is poured into the blood.

DR. W. S. THAYER, Baltimore, has seen several cases which ran a clinical course similar to the one reported by Morse. First, the lymphnodes enlarged, simulating Hodgkin's disease; later, the blood picture of leukemia developed. These occur both in adults and children.

DR. W. H. WELCH, Baltimore, said there is great confusion as to the nature of the various types of enlargements of the lymphnodes. At present, however, 3 characteristic histologic pictures can be distinguished: (1) that of Hodgkin's disease; (2), the lymphoma of leukemia; (3), sarcoma. The last is of course the easiest.

FOURTH SESSION.

Lantern-Slide Demonstration on the Stages of Calcareous Degeneration.

DR. J. GEORGE ADAMI and OSKAR KLOTZ, Montreal, presented the following conclusions: 1. The earliest change in cells which later undergo calcareous degeneration, is one of cloudy swelling or coagulation necrosis. 2. Following this, fatty changes are noticeable and by means of proper reagents, soaps with potassium, sodium, and presumably ammonium bases, can be detected. 3. Such soaps and albumins form a combination which is insoluble in water or salt solution. 4. Soaps and fatty acids have an affinity for the calcium salts in solution in the body fluids and form with them an insoluble compound. 5. Later, judging from the fact that phosphate and carbonate of lime are formed, and the deposit gives no reaction for fats, the fatty acid moiety of the calcium soap is replaced by the more powerful carbonic and phosphoric acids. The studies of the writers, both experimental and on human tissue, were made possible by the use of Sudan III. and silver nitrate solutions. A most significant feature of the study was the demonstration that there is calcareous change in the media of the aorta of practically every person past 30 years. This change also occurs in much younger individuals, marked calcification being found in the aorta of one boy of 17. Their observations point to the possibility of the medial change first occurring in the elastica. Another fact demonstrated is the presence of fat in areas of caseation in tuberculosis. Osmic acid fails to detect its presence but it is clearly shown by Sudan III.

Experimental Arteriosclerosis.

DRS. RICHARD M. PEARCE and E. M. STANTON, Albany, showed specimens of aortas from rabbits in which conspicuous lesions had been produced by repeated intravenous injections of adrenalin. The drug was given every other day for 10 days, or up to several weeks. After about 6 doses, the earliest lesion appears, consisting of focal degenerations in the muscle fibers of the media. After 10 or 12 doses, changes appear in the elastica. These appear to be mechanical in nature and consist of swelling and elongation of the fibrils, with later fracture and curling. Still later, in 4 to 6 weeks, the aorta assumes a condition analogous to arteriosclerosis in man. The vessel is rigid, brittle, dilated, and the intima is irregularly elevated. In many instances there are irregular dilations of the vessel that justify the name of aneurism. The process appears to include degeneration of the media with calcareous change and repair of the media and also of the intima. The lesions support the view of Thoma that arteriosclerosis begins in the media. Pearce is not prepared to make definite statements as to the cause of the lesions thus produced. Mechanical and toxic factors are to be considered; it is probable that it is toxic in nature first and later, especially as regards the elastica, mechanical. Studies, yet incomplete, of ganglion cells near the aorta in one case show changes in those cells.

Phlebo-Sclerosis.

DR. C. F. MARTIN, Montreal, reported the results of studies concerning this condition about which but little has been written. He finds it extremely common in young persons, nearly all under 35 showing it to some degree. The veins of the lower extremity are affected chiefly, but all parts of the body may be involved. In essentially all the cases studied there was absence of arteriosclerosis and also of a history of alcoholism. The condition is more common in males. No local conditions were found to account for the change in the veins.

Observations on Metabolism in a Case of Acute Leukemia and a Case of Purpura Hemorrhagica.

DR. D. L. EDSALL, Philadelphia, found in these two cases remarkable tissue destruction. The conditions in the latter indicated that hemorrhage is not an important feature in the production of the great nitrogen loss in either class to which the cases belong. Differences in metabolism in the cases indicated differences in the character of the conditions producing the tissue loss. This also indicates the varied nature of hemorrhagic lesions and is an argument against the ideas advanced by Magnus Levy.

Influence of the Rontgen-Ray on Metabolism in Leukemia.

DRS. J. H. MUSSER and D. L. EDSALL, Philadelphia, gave the results of studies in 2 cases. One patient rapidly improved under the treatment, the other was uninfluenced and soon died. In the first case, the treatment was immediately followed by a remarkable increase in the excretion of nitrogen, phosphorus, uric acid, and xanthin-bases. In the fatal case there was a slight rise at first but the excretion soon became as before treatment or even lower; just before death the excretion became very low. Edsall interprets these results to show that the effect of the Röntgen-ray is a reaction of the individual and not the direct action of the ray itself. The most probable explanation is that the autolytic processes of the body are stimulated. The result indicates that the process is comparable to resolution in pneumonia, the involution of the uterus after labor, and similar processes. They show the Röntgen-ray may have a profoundly dangerous effect though temporarily benign in its influence, and account for cases of nephritis and other lesions following exposures. The Röntgen-ray is to be used extensively but not in the unthinking way so often employed; accurate dosage is at least necessary. The cases reported suggest the possible beneficial effect of such treatment in cases of general lowered metabolism but no effect has been observed in 2 cases of diabetes. Very suggestive, however, was a case of unresolved pneumonia lingering for weeks which cleared up entirely under daily exposures for a week.

Chronic Acetanilid Poisoning.

This article by Dr. D. D. Stewart, Philadelphia, is published in this issue of THE JOURNAL.

Brief Report on Recent Researches on Bacterial Toxins and Immunity.

DR. V. C. VAUGHAN, Ann Arbor, found that when bacterial cellular substance is heated at 78° with a dilute solution of sodium hydrate in absolute alcohol, the cell substance is split into 2 portions. One portion is soluble in absolute alcohol and contains the poisonous group of the cell. This poisonous group has been studied, having been obtained from the colon, the typhoid and the anthrax bacillus, and the micrococcus of pneumonia. A similar, if not identical, poisonous substance may be obtained in the same way from certain proteid bodies, such as egg albumen and peptone. Animals may be immunized with this toxic body, the immunity thus induced not being specific or at least not markedly so. The part of the cell substance not soluble in alcohol is soluble in water and with this a specific immunity can be obtained. This second portion also contains a hemolytic body. The studies indicate that the same poisonous body is in both living and dead cells; it possibly belongs to the neurin group. Vaughan believes if we ever get a curative for typhoid it

will not be a serum but the non-poisonous residue of bacteria. This ought to bring about in the body in 6 days what nature does in 28 to 40 days in those spontaneously recovering from typhoid.

Case of Acromegaly.

DR. CHARLES L. GREENE, St. Paul, cited a case in which the features were: 1. Coincidence of symptoms of myxedema and undoubted acromegaly with enlargement of the thyroid gland. 2. Disappearance of all symptoms of myxedema associated with shrinking of the thyroid gland under the administration of thyroid tabloids. 3. The shifting of the site of abnormal bony growth. 4. The long period of observation, 8 years. The first enlargements were of the hands and feet and the upper jaw. After 5 years, enlargement of the clavicles, scapulas, and ribs began and has progressed steadily up to the present time. The jaw and the larynx have not increased in size since 1898.

Nature of Cirrhosis of the Liver.

DR. A. O. J. KELLY, Philadelphia, said that the changes found indicate that cirrhosis of the liver is primarily a degenerative process involving the parenchyma of the organ. In addition to changes in the cells they become arranged irregularly as regards each other and the central vein; in some lobules the vein cannot be recognized. This degenerative change is followed by reparative processes on the part of the parenchyma as well as by hyperplastic changes in the connective tissue. Clinical observations of the size of the liver in 110 cases of cirrhosis showed that in 40 per cent. the liver was enlarged, this being true even of some cases accompanied by ascites. In a number of cases the cause of ascites was evidently peritonitis rather than the condition of the liver itself.

Pathologic Anatomy of Exophthalmic Goiter.

DR. W. G. MACCALLUM, Baltimore, found constant changes in the thyroid in 28 cases, consisting principally of budding or proliferation of the alveoli of the gland. The changes, though constant, were not always of equal intensity. In the 9 cases in which they were studied, the parathyroid glands were practically normal.

Officers Elected.

President, Frank Billings; Vice-President, F. P. Kinnicutt; Secretary, Henry Hun; Recorder, Solomon Solis Cohen; Treasurer, J. P. Crozer Griffith; Councilor, T. Mitchell Prudden.

ILLINOIS STATE MEDICAL SOCIETY.

(*Concluded from page 1706.*)

SURGICAL SECTION.

Surgery of the Stomach.

DR. ARTHUR DEAN BEVAN, Chicago, said that stomach surgery to-day stands out as the most gratifying surgical field in the process of rapid development. This fact is perfectly patent that the demonstrated value of surgical procedures in treating stomach lesions warrants a much wider application of such methods than are at present practiced. His plea is that the cases must be carefully selected and the surgeon must be sure that an operation is strongly indicated. Cases that can be cured by a summer's outing or by carefully selected diet should not be operated on; nor should hopeless cases be operated on. He discussed the surgery of the stomach under two heads: First, surgical treatment of carcinoma of the stomach, and, second, the surgical treatment of ulcer and its complications and sequelæ. If cases of carcinoma of the stomach are diagnosed early, and operated on at a time when the entire focus of disease can be removed, a cure can be effected. As to stomach ulcer, when intelligent medical treatment fails and the symptoms return and persist, then, and not till then, does the uncomplicated stomach ulcer become a surgical problem. The great majority of cases of perforation of the stomach by ulcer can be saved by early surgical interference.

DR. E. WYLLYS ANDREWS, Chicago, discussed perigastric adhesions after gall stone operations, pointed out their surgical importance, and described a new operation for their relief.

DR. CARL E. BLACK, Jacksonville, discussed the surgery of the bile tracts.

DR. EMERSON M. SUTTON, Peoria, discussed the possibilities of surgery of the duodenum.

DR. M. L. HARRIS, Chicago, spoke of the surgical treatment of injuries to the spleen due to subcutaneous penetrating wounds, and pointed out the value of splenectomy in certain anemias associated with enlargements of the spleen.

Surgical Tuberculosis.

DR. WM. E. GUTHRIE, Bloomington, said that while physicians should study how to help tuberculous patients by the proper removal of diseased tissue, they should not forget that vastly more necessary is the conservation of the power of resistance of the patient to disease through suitable hygiene and forced feeding. He who would treat tuberculosis in any form successfully must have for his watchword, feed, feed, feed.

Tubercular Nephritis.

DR. ROBERT CHRISTIE, Quincy, reviewed the literature of this subject with reference to comparative frequency and alluded to the more recent investigations and observations that have been made. He discussed the modes of infection, primary, secondary, metastatic atypical cases, without characteristic symptoms, other than localized tumefaction, and reported a case in which he did a primary abodminal nephrectomy, which was followed by recovery of the patient.

Errors in the Diagnosis of Abdominal Troubles.

DR. CLIFFORD U. COLLINS, Peoria, said that perfection in diagnosis marks the highest development in science and medicine. With a correct diagnosis it is not hard to institute the proper treatment. The development of diagnosis has been a difficult process marked by many errors. While one is endeavoring to approach perfection in diagnosis, it is highly probable that errors will always be made. Although errors are annoying, each one conveys a lesson, and, if studied and interpreted correctly, will result in much good to the examiner. The keeping of complete case records will permit of close and careful study of each error and lead to success, because "success does not consist of not making any mistakes, but in not making the same mistake twice."

Congenital Club-Foot.

DRS. JOHN RIDLON and CHARLES E. EIKENBARY, Chicago, discussed the varieties of congenital club-foot; also the anatomy of congenital equinovarus and the theories of its causation. They discussed treatment by manipulation, by braces, by the Thomas wrench, by hand modeling, with the patient anesthetized, by the Granton osteoclast, by simple tenotomies supplemented by modeling, or the use of the wrench, or the osteoclast by the Phelps open incision and Jones' modification of it, and by linear and cuneiform ostectomy and enucleation of the astragalus. The methods of after-treatment by plaster splints and by braces were briefly considered and the statistics of Dr. Ridlon's cases for the past twelve years were given.

Diagnosis and Pathology of Neoplasms of the Brain.

DR. HUGH T. PATRICK, Chicago, said that the most frequent tumors were glioma, sarcoma, and solitary tubercles. He enumerated the less frequent forms. Structure and manner of growth of tumors and the physical properties of more frequent tumors were pointed out. As to diagnosis, the determination of intracranial neoplasms is generally easy. Exact localization, however, is generally difficult, frequently impossible. He mentioned the classical symptoms of brain tumor and the points of differential diagnosis. The tumor may simulate apoplexy. General paresis, arteriosclerosis, nephritis, migraine, etc., were discussed in connection with brain tumors; also the symptoms indicating the seat of growth.

Insanity Following Skull Injuries.

DR. E. MAMMEN, Bloomington, referred to contusions, concussions, the location of injuries, fractures, and symptoms following skull injuries. The symptoms are sometimes slow in development. He spoke of the changes in the tissue at the site of injury, described an operation for relieving pressure, and

spoke of the relief following the removal of changed tissues. He cited illustrative cases and gave the results.

Cerebral Infection from Middle Ear Disease.

DR. NORVAL H. PIERCE, Chicago, referred to the anatomic paths by which suppurations within the temporal bone reach the contents of the calvarium. He discussed the character of the primary inflammations which produce intracranial complications, as well as the influence of locality of the primary inflammation on the different intracranial complications. Purulent inflammations of the dura and extradural abscess were discussed. He referred to meningitis and meingoencephalitis serosa following suppurations within the temporal bone; also to phlebitis and thrombosis of the dural sinuses and of the jugular vein. Reference was made to isolated thrombosis of the jugular bulb and to otitis brain abscess.

Prophylaxis of Syphilis.

DR. ALFRED SCHALEK, Chicago, said there is renewed activity in this direction among physicians. The reasons are not an increase in the number of cases, nor a more severe course of the disease, but better statistics and the present improved prophylactic measures against other infective diseases. The spread of syphilis can be limited by means which apply to the general public and to the individual. The former includes control of prostitution, but has proved a failure. Impracticable also is the suggested compulsory report of cases by physicians. A better measure is the education of the public as to the nature of the disease. Instructions should be given how to avoid infection innocently. He makes a plea for increased facilities for treatment in hospitals and dispensaries. The author thinks that at the present time the most valuable prophylaxis against syphilis ought to be practiced by the medical profession in their relations with their patients. Since no methods are known to abort the disease after infection occurs, the most important duty is thorough treatment.

Some Cases Demanding Removal of the Eye.

DR. J. BROWN LORING, Chicago, discussed the responsibility resting on the physician and surgeon, as well as the ophthalmologist, with regard to the treatment of blind eyes. Reports were given of three cases of sarcoma, one of glioma, and five of iridocyclitis of various origin, causing or threatening sympathetic ophthalmia. The first four cases indicated danger to life, the others danger to sight. Statistics were given as to the frequency of sympathetic ophthalmia. Attention was called to the unsatisfactory and at times contradictory manner in which the subject of treating eyes blind from iridocyclitis is discussed in modern text-books. A plea was made for a more radical treatment of these cases from every standpoint.

Immediate Diagnosis and Treatment of Lacerations of the Vagina and Pelvic Floor and Perineum.

DR. C. S. BACON, Chicago, classified tears as external and internal. In both there are many grades, and either may be simple or combined with those of the other class. Diagnosis concerns both the finding of these lacerations and determining their extent and importance. Both touch and inspection are employed. The pain caused can be disregarded, but the risk of infection is considerable and should be carefully considered. Hirst's proposed delay of all examination and operation till the end of a week is not practicable, and the author favors immediate examination and repair, but only with as careful asepsis as would be employed in a secondary operation. In a non-operative labor, when there is no hemorrhage with the expulsion of the head, and no severe external tear, there will be no internal laceration, and an internal examination is unnecessary.

Hemorrhage is rarely an indication for operation in vaginal and perineal tears. The bad results of unimpaired lacerations are generally the reasons for operation. Spontaneous repair is a delusion. Proper preparation is very important in all repair operations. Especial attention should be given to vaginal lacerations which involve the pelvic diaphragm and extend into the central detachments of the accessory diaphragm, but do not implicate the skin surface. Here the skin bridge may be cut and the repair made as in a combined vaginal and perineal laceration, or the internal suture can be applied so as to bring in apposition the divided structures. The perineal sutures of silkworm gut must not be tied too tightly. In a complete rupture the method of restoring the rectal tube by passing the suture through the rectal mucous membrane is preferred to the passing of the suture from the perineal side. The author prefers cutting the ends of the perineal sutures short. He discards powder. Catheterization is unnecessary. A wide occlusive dressing, fastened by the four corners to the abdominal bandage, is much better than the ordinary dressing held by the T bandage. Chief stress is laid on attention to details in the preparation for and technic of operation, without which poor results and total failures furnish grounds for discarding immediate operations.

Pelvic Infections in Women.

DR. T. J. WATKINS, Chicago, said that pelvic infection was preferable to pelvic inflammation as a name to designate disease, as infection injures and destroys tissue, whereas inflammation tends to conserve tissue. He alluded to the importance of the disease and said that the same principles are involved in pelvic infections as in infections in other parts of the body. He considered the etiology, pathology, symptomatology, diagnosis, prognosis and treatment. The importance of prophylaxis was pointed out. Topical applications are often of little or no value. Conservatism during the acute stage is of great importance. Spontaneous and complete recoveries sometimes ensue.

DR. FERNAND HENROTIN, Chicago, made some remarks concerning when and how to treat septic pelvic affections of women by vaginal incision and drainage.

DR. GEORGE SCHMAUCH, Chicago, discussed the diagnosis and treatment of rupture of the uterus.

DR. L. H. NICKERSON, Quincy, discussed the diagnosis and treatment of laceration of the vaginal portion of the uterus and fornix vaginæ.

Intussusception in Infancy and Childhood.

DR. J. H. HESS, Chicago, stated that (1) intussusception demands an early diagnosis and immediate treatment. (2) Abstinence from all food, and, far more important, purgation must absolutely be prohibited. The question of sedatives in the form of opium, etc., must rest with the physician. (3) Irrigation may be tried once or twice under the proper conditions and in properly selected cases. Preparation for immediate laparotomy should be made in the case of failure. Hot salt solution or plain water may be used under a pressure of not more than three feet, the fluid being allowed to remain in the bowel for not less than ten minutes. He pointed out the contraindications to irrigation as follows: (1) Recurrence after a previous complete or partial reduction. 2) The very acute and severe types of this disease, which result in early destruction of the bowel wall, but which cases are fortunately not the most frequent type. (3) Where there are signs of beginning gangrene or ulceration evidenced by subnormal temperature, profound toxemia and other septic symptoms. (4) Enteric intussusceptions. (5) Laparotomy should follow failure of irrigation without delay. One should attempt simple reduction from below upward. In irreducible cases, resection within the bowel in selected cases, or, where this is not feasible, resection with end-to-end anastomosis should be attempted where the patient's condition makes it practicable. An artificial anus or simple packing about the bowel requires a secondary and only too frequently a fatal operation.

Bronchoscopy for the Removal of Foreign Bodies from the Lungs.

DR. E. FLETCHER INGALS, Chicago, mentioned previously reported cases, discussed the removal of foreign bodies by the upper and lower routes and described the instruments used in removing these bodies.

Other Papers Read.

DR. GEORGE E. SHAMBAUGH, Chicago, discussed the indications for opening the mastoid process in cases of acute empyema of the cells where there is an absence of signs over the external surface of the mastoid.

DR. JAMES W. TWITCHELL, Belleville, reported a case in which recovery occurred following a perforated wound of the intestine without surgical interference.

The following papers were also read:

"The Value and Place of Duodeno-Choledochotomy in Gallstone Surgery," by Dr. John C. Hancock, Dubuque, Iowa; "Inversion of the Uterus, with Report of Cases," by Dr. P. L. Markley, Rockford; "Pathology and Diagnosis of the Lesions of the Spinal Cord and Peripheral Nerves," by Dr. F. P. Norbury, Jacksonville; "Malignancy in Uterine Myomata," by Dr. Henry F. Lewis, Chicago; "Air Examinations, Importance and Results," by Dr. Adolph Gehrman, Chicago; "Typhoid Fever," by Dr. G. G. Craig, Rock Island; "Cases of Erysipelas Treated with Marsh Purslane," by Dr. H. C. Mitchell, Carbondale; "Respiratory Oxidation Stimulants in Nephritis, Pulmonary Dyspnoic and Allied Crises," by Dr. Geo. F. Butler, Chicago; "Syphilitic Meningitis in Children," by Dr. Wm. J. Butler, Chicago; "Pneumonia in Children," by Dr. J. C. Cook, Chicago; "Case of Poisoning from Oil of Wintergreen," by Dr. F. C. Vandervort, Bloomington: "Stricture of Esophagus Following Typhoid Fever, Colloid Carcinoma of Cecum, Penetrating Wound of Liver and Gastroenteroptosis," by Dr. S. C. Plummer, Chicago; "The Commerce of Surgery," by Dr. Fernand Henrotin, Chicago.

The last mentioned paper will be published in full in THE JOURNAL.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, April 12, 1905.

The President, DR. JAMES M. ANDERS, in the Chair.

Resection of Elbow.

DR. G. G. DAVIS exhibited a girl of thirteen, who, at the age of seven, sustained an injury of the elbow resulting in stiffness. Two years ago there was pain and discharge. On account of the excessive pain, the ulnar nerve was freed, but the pain continued. A skiagraph showed ankylosis of the bones of the forearm with those of the arm. He made a resection, and the result is ability to do light housework and the use of the arm in sewing. The apparatus used to secure motion was an attachment to the forearm with a light weight allowed to hang at the back.

DISCUSSION.

DR. HENRY E. WETHERILL thought the light weight employed by Dr. Davis an improvement over the heavy one of a flat iron sometimes used to maintain motion. He showed a small device cut from wood, on the plan of the stethoscope, for measuring the amplification of sound of the aortic and other valves. The instrument is flute-like in appearance, is placed in the ear, and the fingers one after another taken off of the holes until the sound is not heard. The roaring, a troublesome feature of the ordinary stethoscope, is avoided by the use of a pinhole. The instrument has proved of practical value.

Encysted Calculus Removed by Suprapubic Cystotomy. Enlarged Prostate.

DR. EDMUND W. HOLMES reported a case of encysted calculus removed by suprapubic cystotomy from a patient, aged 45, presenting the classical symptoms of stone in the urinary bladder. Under ethyl chlorid anesthesia the bladder was washed out with a Bigelow evacuator and a careful systematic search made with a sound. The shadowgraph showed the presence of a small calculus. Suprapubic section revealed the calculus encysted in the lower, posterior wall of the bladder. Its complete encapsulation had caused failure of detection by the sound.

Dr Holmes also reported a case of enlarged prostate removed by perineal prostatectomy in a man aged 72. The first attack of retention of urine had occurred five years ago requiring catheterization for about two weeks. In August, 1904, there was a second attack during which catheterization became difficult and painful. Dr. Holmes saw the case in consultation, and subsequently did a perineal prostatectomy. Later, the patient refused catheterization; the fistula remains in the perineum (8 months after operation). The man has complete control over urination, the urine passing out altogether through the opening in the perineum. The man is in good health.

Posterior Gastrojejunostomy for Benign Stenosis of the Stomach.

DR. WILLIAM H. MORRISON presented the following case: The patient, male, aged 44 years, came under observation in August, 1904, with evidences of almost complete stenosis of the pylorus and great dilitation of the stomach. During the previous four years there had been three attacks of gastric hemorrhage. He vomited almost daily, and in the vomitus were frequently found articles that had been eaten one or two days previously. There was great weakness and emaciation. No tumor could be detected. A posterior gastrojejunostomy, with the Murphy button, was done on Nov. 4, 1904. Recovery from operation was rapid and complete. All symptoms of digestive disorder disappeared, and the patient was able to eat and digest all varieties of food. Strength and flesh were rapidly regained and in four months the weight increased forty pounds. The button was not found.

DR. WILLIAM L. RODMAN regarded the case a proper one for gastrojejunostomy, and agreed with Dr. Holmes that the Murphy button still has its place in gastric surgery. The operation of anterior gastrojejunostomy, he believes, is passing out of use.

Epidemic Cerebrospinal Meningitis.

DR. JAMES C. WILSON read this paper, which was published in THE JOURNAL, April 29, 1905, p. 1334.

DISCUSSION.

DR. JAMES TYSON said that there is a tradition that the epidemic which occurred during the war of the Rebellion was introduced by returning soldiers, and that there was also a popular belief that the cause of the disease lay in molded hay. Since that time, cerebrospinal fever has never entirely disappeared from Philadelphia. The most important question of the subject is that of its contagiousness. While Dr. Wilson had deduced remarkable cases, apparently dependent one on another, he recalled a paper by Dr. A. C. Abbott before the Philosophical Society citing cases occurring one after another in the most remote districts. Dr. Tyson believes that the disease is to a certain extent contagious, but not virulently so, as compared with typhoid fever. He is favorably inclined toward the submersion treatment of the paralytic phenomena. In a case of almost total paralysis, this treatment, in conjunction with massage, has brought about almost entire recovery. The principle of the treatment is to place the patient in a bath of warm water and to encourage voluntary motion, which is accomplished with greater facility than in the open air.

DR. A. C. ABBOTT said that there appears to be a pneumococcus meningitidis, which is differentiated only by the modern method of lumbar puncture, or is found at autopsy. The opinion is becoming prevalent that, as in the case of pneumonia, there are individuals going about harboring the organism which the profession regards as the most productive factor of meningitis. It would look as if the widespread appearance of the disease, as it is understood, often may be due to auto-infections that are induced by some undetermined etiologic factor concerned with a corresponding outbreak of pneumonia. What that factor is, has not yet been determined.

The opinion is general that if the disease is transmissible at all, it is mildly so, and the experience of the Department of Health in Philadelphia has not been different from that of others. Up to the present time there have been reported at the Health Department, since September, 58 cases of cerebrospinal fever, with 18 deaths, a mortality of 31 per cent., and this is not allowing for erroneous diagnoses or doubtful cases. Of 34 histories, 6 cases were very doubtful; 5 were almost certainly tubercular. Two of these were shown to be tubercular by lumbar puncture, and 2 cases by lumbar puncture at the autopsy were found to be due to pneumococcus, so that out of the 34 there were 13 which might be taken out of the original 58. From records of outbreaks it appears that the disease is very mildly contagious.

DR. LONGCOPE gave a review of the bacteriologic work in acute meningitis in the Pennsylvania Hospital in the past two years. Eighteen spinal fluids of such cases have been studied. In 4, the pneumococcus was found, and in 12 the meningococcus. There were excluded 8 cases in which the tubercle bacillus was found. In 1 case, the organism was found on the third and fourth days of the disease. In 385 autopsies,

there were 24 cases of acute meningitis and 15 of tubercular meningitis. Six of these were due to either the streptococcus or staphylococcus, and were secondary to scalp wounds, otitis media, or to fractures of the skull. He referred to the conjunctiva as being an additional source from which the organism may be distributed. In one of the cases at the Pennsylvania Hospital there was severe purulent conjunctivitis in which the meningococcus was isolated. The case came to autopsy and the lesions were typical of acute meningitis and the organism was found again in the exudate.

DR. FRANK WOODBURY believes that treatment should not be directed too markedly to the lesion in the nerve centers, brain and spinal cord, because the disease is primarily a blood infection. He advocates the administration of such antiseptics as would be destructive to the meningococcus in the blood, and wherever the blood would carry it into the brain and spinal cord. Such antiseptics are creosote, guiacol, betanaphthol and other coal-tar derivatives. It seems to him possible that these cases may be favorably influenced by injections of formaldehyd into the blood.

DR. NORMAN B. GWYN referred to his observation of an epidemic of cerebrospinal fever in 1899. Eleven cases were attended in the hospital and seen frequently by doctors, nurses and students, yet there was no development of the infection among the attendants. On the other hand, one of the cases gave a distinct history of having been 24 hours before in the barracks from which several cases of meningitis had been reported. Among the interesting observations of these cases was the development of chronic cases in which there was fever, typhoidal in type, with the temperature running to 105-6, which might persist for five to seven weeks. There were cases with acute symptoms, such as convulsions. In each case lumbar puncture was not only of value as a diagnostic measure, but of very material value in relieving the distress of the patients. Convulsive seizures could be allayed as the fluid was drawn from the cord. In the bacteriologic study, the *Diplococcus intracellularis meningitidis* was obtained without difficulty in every acute case. As the case developed into the chronic stage, it became more and more difficult to find the organism in the fluid. Blood cultures, in one case, demonstrated the presence of the meningococcus. In this case there was severe arthritis, and the meningococcus was found in the joint fluid. In many cases the severe symptoms of meningeal irritation, such as rigidity, were frequently relieved by immersion in hot water. In one case, surgery was resorted to. The needle brought away thick pus in which the staphylococci were readily demonstrated. The spinal cord was opened and freely drained and the case did remarkably well for some weeks, but died later from secondary infection of the fluid.

DR. GWYN believes that the suggestion of the disease being a blood infection should be given more consideration, and thinks it possibly due to this that surgical procedures have failed.

DR. WILLIAM WADSWORTH spoke of the probable outbreak of meningitis following a similar infection in horses.

DR. J. B. CROZER GRIFFITH referred to his experience in the Children's Hospital. Each year brings to the hospital some cases of what may be called cerebrospinal fever. Though they have come in groups of two or three from a family, they are usually isolated, and all the types have been presented. There has never been a spread of the infection in the hospital, and the cases are not isolated. He emphasized the marvelous irregularity of the disease in type. He referred to one case outside the hospital which was absolutely typical. Another was fairly pneumonic, and in a third, it would have been said there was present an ordinary pneumonia, were it not for the observation of a little more rigidity and tendency to abdominal rash than is expected.

DR. A. E. ROUSSEL emphasized the fact that even in acute cases the *Diplococcus intracellularis* is not found on the first examination. In one case mentioned in the literature as many as three examinations were made before the organism was isolated. In subacute cases the organism is not found at all. In one case, lumbar puncture was performed twice, and was negative in both instances. The patient improved, but afterward passed into a chronic state. Death occurred outside of the hospital, and it was said that the postmortem was entirely corroborative of the diagnosis.

DR. BOYER, of the Municipal Hospital, said that nine cases of cerebrospinal fever had been sent to the hospital since December, of which a full report would be made at some future time. In one case, on the fifteenth day, there was a leucocytosis of 49,000; on admission, the count was 17,600. One case showed a count of only 7,400. In 7 cases the diplococcus was secured from the spinal fluid and from the nasal mucous membrane. Kernig's sign was present in all the cases. Three gave positive Widal reaction. In none of these three was there any sign of enteric fever. All had retraction of the head and stiffness of the back. Babinsky's sign was met with frequently. The first symptom noted was anesthesia of the conjunctivæ, and generally of the corneæ. In several instances in which it was thought there were pressure symptoms, lumbar puncture did not show excess of fluid. This, he thought, was due to the fulminate type of the disease. In the nine cases in the Municipal Hospital not one vomited while in the hospital. In one case there was marked keratitis, and in one, ulcer of the cornea. The latter showed the meningococcus.

NATIONAL ASSOCIATION FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

First Annual Meeting, held at Washington, D. C., May 18-19, 1905.

(*Concluded from page 1708.*)

Resolutions on Governmental and Private Responsibility.

The following resolutions, already referred to, were offered by Dr. H. S. Anders and were adopted:

WHEREAS, The sanatorium is now recognized as constituting one of the most valuable agents in the treatment of tuberculosis; and

WHEREAS, In the face of the still enormous needs of the tuberculosis problem hardly more than a fair beginning has been made in its solution: be it

Resolved, That we emphasize publicly and primarily the duty of governments, especially state and municipal, in the more general founding and maintenance of such sanatoria and encourage the philanthropic opportunity of private individuals to the same end. Further, be it

Resolved, That we emphasize the educational, disciplinary and hygienic value of these sanatoria and special hospitals, not only to the segregated, instructed and aided patients themselves, but to the general practitioner and to those patients themselves, but to the general practitioner and to those patients for whom institutional treatment is not possible or feasible.

Early Diagnosis.

The report of the committee on early diagnosis, referred to below on page 1805, will be published in full in THE JOURNAL.

PATHOLOGIC AND BACTERIOLOGIC SECTION.

Channels of Infection in Tuberculosis.

DR. WILLIAM H. WELCH, Baltimore, was introduced by Chairman M. P. Ravenel and delivered the introductory address. Although there are many conflicting statements and theories regarding tuberculosis questions, they do not materially influence measures of protection against the disease which must be carried out on broad lines in which there is more unanimity of opinion. Dr. Welch does not believe the statement of some writers that 98 per cent. of all persons of more than 20 years possess tuberculous lesions. That the small specks seen in organs and called by some tuberculosis are due to attenuated bacilli, as has been suggested, is a question for study. On the whole, it is not best so to regard them. Welch agrees with Cornet as to the fallacy of giving the frequency of tuberculosis in terms of those dead; it should rather be based on the living. If every person that died was subjected to postmortem, such high figures would not be obtained. Again, the conclusion that one person is resistant and another is susceptible, because the first escapes lesions and the second does not, is not justified; the virulence of bacilli in the two instances may be the reason. Welch does not wish to be understood, however, as not believing in predisposition to tuberculosis; he does, but does not like the term ubiquitous as applied to the bacillus. This indicates that it is widespread and aggressive as are the common pyogenic organisms, a view that can not be endorsed.

As to the origin of tuberculosis from bovine and from human sources, the transmissibility of human bacilli to cattle has been demonstrated beyond a doubt. In this connection two points are yet to be determined: (1) The frequency in human beings of tubercle bacilli virulent to cattle, and (2) what percentage of these organisms came originally from cattle. The transmissibility of bovine bacilli to human beings can not be demonstrated experimentally and must be judged from inferences. One method of doing this is careful clinical study, but conclusions therefrom are open to such fallacies that they rarely or never can be considered positive. Another method is to study the localization of the disease, principally as to whether there is primary intestinal tuberculosis. Here we are met with the fact that many of these intestinal lesions are not bovine in origin.

Regarding primary intestinal tuberculosis, there is the most remarkable variation in statistics. Welch can explain them in no other way than by supposing that the incidence is greater in some localities than in others; the irregularity remains a mystery. The whole determining point is the character of the bacilli found in the lesions. This will prove an exceedingly laborious task to perform and it will be a long time before there are sufficient data to settle the question. There is now enough evidence to indicate that the majority of cases are due to the human bacillus, but cases of undoubted bovine origin have been found and render infection from this source a by no means negligible factor. The view of Behring that infection occurs in early childhood and that nearly all cases are bovine in origin, can not be maintained. His assertion, however, is likely to lead to as important investigation as did the famous statement of Koch, and hence is of value. A sufficient number of cases of congenital tuberculosis have been demonstrated to show that this is not a pathologic curiosity; Schmorl's studies indicate that the entrance of tubercle bacilli into the fetus of a tuberculous mother is not uncommon, and the possibility of infection thereby is not to be disregarded by physicians. Regarding the relative frequency of respiratory and alimentary infection in tuberculosis, Welch says that though the latter is far more frequent than was formerly supposed, cases of respiratory infection are still the more numerous.

The Value of Serums in Protection, Diagnosis, Prognosis, and Treatment of Tuberculosis.

DR. A. J. RICHER, Montreal, obtained surprisingly good results from the use of Marmorek's antitubercular serum in 7 advanced and 9 incipient cases. The action appears to have been specific, as it did not fail in any instance. His method of employing the serum is to give 10 c.c. during the first three days, 2, 4, and 4 c.c. respectively, then rest ten or fifteen days. The three doses are then repeated, with the same resting period alternating, until 50 c.c. have been given. Finally, 5 c.c. are given monthly for four or five months.

DR. G. FIGARI, Genoa, reported on the natural and artificial protection of man against tuberculosis. He obtained the most hopeful results from the use, by the mouth, of substances found in the blood, milk and flesh of animals in which the production of immunity has been attempted. By administering the serum of such animals, a certain degree of immunity in human beings may be attained. The results have been sufficiently encouraging to warrant the trial of this method of protection in the children of tuberculous parents and in others specially predisposed to the disease.

DRS. H. M. KINGHORN, Saranac Lake, and M. P. RAVENEL and H. R. M. LANDIS, Philadelphia, considered the serum diagnosis of tuberculosis. Lack of correspondence in certain features of the two reports appear due to differences in the cultures employed, the standardization of which is the greatest difficulty to overcome in this work. Kinghorn, in an experience with 62 cases, found reaction usually absent in far-advanced cases and most often present in favorable cases. His results do not lead him to rely on the method as a sure or reliable test of tuberculosis. Landis also concludes that the agglutination test is not available for diagnosis. A low agglutinating power is unfavorable in prognosis. His experiments indicate that the resisting powers of individuals are increased by sanatorium life.

DRS. BALDWIN, KINGHORN, ALLEN, and NICHOLS, Saranac Lake, dealt with the serum and tissues of immunized rabbits. The results were largely negative, one point being there is no marked difference in opsonic power of immunized and control animals.

Papers were also read on "The Blood in Tuberculosis," by J. Ullom and F. A. Craig; "Tuberculosis of the Thoracic Duct and Acute Miliary Tuberculosis," by W. T. Longcope; "Studies in Mixed Infection in Tuberculosis," by M. P. Ravenel and J. W. Irwin; "The Thyroid Gland in Tuberculosis," by W. B. Stanton, and "Landry's Paralysis Complicating Tuberculosis," by D. J. McCarthy, all of Philadelphia, and on "The Vitality of the Tubercle Bacillus in Sputum," by D. C. Twitchell, Saranac Lake.

CLINICAL AND CLIMATOLOGIC SECTION.

Clinical Nomenclature.

This subject was presented in the form of a report of a committee of six of which Vincent Y. Bowditch, Boston, is chairman. In general, the outline suggested by the committee follows that of Turban in order that statistics here may be compared with those of Germany, England and France in which that classification is used. Minor changes only have been made. The point in the report which brought out the most discussion is that relating to the term "cured," which is defined as the condition in which "all constitutional symptoms and expectoration with bacilli are absent for a period of two years under ordinary conditions of life." This time was considered too short by many speakers. Some objected to the word "cure" in this connection as tending to create in the minds of patients a false sense of security, and rendering more difficult the enforcement of proper methods of living after treatment. The report as presented was finally adopted, as was also a resolution asking that a copy be sent to each member of the association and each tuberculosis organization in the country with the request that the outline be followed for a year and any criticism based on actual use be sent to the committee before the next annual meeting.

The Relation of Tuberculosis to Life Insurance and to Insurance Companies.

DR. C. L. GREENE, St. Paul, called attention to the great loss to insurance companies from tuberculosis, and the need for enlisting them in the work projected by the association. He feels confident that insurance companies are ready to help if the matter is properly presented to them. The aid they might give in disseminating literature, with their enormous circularizing facilities, can hardly be estimated. They also should be solicited for aid in erecting sanatoriums in view of treating therein policyholders who contract the disease. Discussion of this subject led to the resolution adopted in the general meeting.

Early Diagnosis.

DR. ARNOLD C. KLEBS, Chicago, presented the report of a committee of five on this subject. The report discusses in detail physical signs and methods of diagnosis. The use of newer methods, such as tuberculin, iodin, and the Röntgen ray, is discouraged, emphasis being placed on the value of older means carefully applied. Discussion brought out many opinions favorable to the use of tuberculin. The need of better instruction of medical students in the diagnosis of incipient cases was particularly emphasized.

Open-Air Treatment of Surgical Tuberculosis.

DR. W. S. HALSTED, Baltimore, gave notes on 13 cases which illustrate the favorable results to be obtained from proper outdoor life for such patients. Some of the results were remarkable when compared with the slow progress, or lack of progress, of the case while indoors. This salutary effect is also shown by the results of the seaside treatment of surgical tuberculosis at Sea Breeze, Coney Island.

Role of Climate in the Management of Tuberculosis.

DR. C. L. MINOR, Asheville, presented an introductory report of a committee of six members, which was adopted after considerable discussion.

Influence of the Advent of the Tuberculous on Native Populations.

DR. C. F. GARDNER, Colorado Springs, said that theoretically the danger in this regard is very great. Practically, the general statement to be derived from answers to letters sent to 50 resorts is that non-imported tuberculosis in such places has not increased as a result of the advent of tuberculous patients.

Sanatorium Treatment of Consumption.

Several papers were read on each of the two subdivisions of this topic: (1) cases demanding sanatorium treatment regardless of climate, and (2) cases for which sanatorium control may be regarded *sub judice*.

DR. J. P. C. FOSTER, New Haven, advocated the systematic detention in hospitals, by health officers, of indigent consumptives, even though they are able to earn their living. Such people are a menace to others and should be provided for by each city or town. The general result of sanatorium treatment as voiced by all the speakers is favorable; as yet there is nothing to equal the hygienic treatment of tuberculosis.

There was also read papers in the after-treatment of tuberculosis, forms of buildings suitable for open-air treatment, and clinical studies of the disease.

DR. H. M. BIGGS, New York, presented the introductory report of a committee of four members, which recommended for distribution among the people a leaflet somewhat similar to those used by health authorities in Germany.

At a testimonial dinner to Dr. Trudeau a general tribute of honor was paid Dr. Trudeau for his far-seeing efforts in behalf of the tuberculous, efforts which, at first derided, have, nevertheless, borne wonderful fruit.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Alcohol Habit.

T. Haven Ross, in *N. Y. Med. Jour.*, states that the first thing to do in the management of the alcohol habit is to regulate the diet and hours of rest. Explain to the patient, to some extent, the pathologic effect of the abuse of alcohol, and impress on him the importance of avoiding temptations.

Mental treatment is as important as that of drugs, and when the two are properly united in their proper proportions they are very efficacious. In regard to the treatment of the physical state, the first thing to do is to clear out the gastro-intestinal tract. The author prefers calomel in small doses, giving grain 1/10 (.006) hourly until a free watery stool is produced, followed by a saline, if there are any signs of nephritis present. The liver must be kept active, and this is best accomplished by the administration of the following combination:

℞ Enonymin ..... gr. 1/8 | .008
Res. podophylli ..... gr. 1/20 | .003
Pulv. ipecac ..... gr. 1/8 | .008
Hydrarg. chloridi mitis ..... gr. 1/8 | .008
Aloini ..... gr. 1/12 | .005

M. Ft. capsula No. i. Sig.: One such capsule at bedtime.

The foregoing dose should be regulated to meet the needs of the individual case, as one natural bowel movement, as a rule, should be obtained daily and in some cases two or three times daily. In the general systemic treatment, the author relies on strychnin and ergot assisted by a safe hypnotic and a proper tonic. He prefers the nitrate of strychnia to any other form, giving it in doses of gr. 1/30 (.002) every four hours. This dose should be increased or diminished to suit the individual case. This dose, according to the writer, stimulates digestion, and tends to reduce excitability of the brain and spinal cord. It stimulates respiration, the heart's action and vasomotor centers, replaces alcohol as a stimulant, and acts as a "mental" antidote to alcohol. Care should be observed in its use in order to avoid any cumulative action. He prefers this preparation to nux vomica. Ergot is also recommended, given by the mouth or hypodermically, in order to avoid gastric irritability. Ergot should be given as often as necessary to control the circulation of the blood through the system and to prevent those symptoms that follow the reduction or withdrawal of alcohol. By this preparation the so-called "wet brain" can be avoided.

As a tonic and stomachic, one of the bitters containing iron is preferable. No rule should be laid down as to whether the alcohol should be withdrawn gradually or suddenly, as the physical and mental condition of the patient should decide that. In the majority of cases, however, the author recommends the withdrawal of alcohol at once and supplying the cravings of the system with the foregoing treatment. If opium is required at any stage of the treatment, it should be given without the patient's knowledge.

After the desire for drink has ceased, the hepatic and general tonics should be continued for some length of time afterward.

Hiccough.

Robin, in *Med. Press*, recommends the following combinations in relieving hiccough:

℞ Picrotoxin ..... gr. i | .06
Alcoholis q. s.
Morph. hydrochlor. ..... gr. i | .06
Atropinæ sulph. ..... gr. 1/5 | .012
Ergotin ..... gr. xv | 1
Aquæ laurocerosi ..... ℥iii | 12

M. Sig.: Five drops four times a day. And

℞ Magnesiæ (calcined) ..... gr. xxx | 2
Sodii bicarb. ..... gr. xx | 1 | .30
Codeinæ ..... gr. 1/5 | .012
Bismuthi subnit. ..... gr. xv | 1
Pulv. cretæ ..... gr. xv | 1

M. Ft. chartula No. i. Sig.: One such powder three times daily.

The following combinations have also been recommended by different authorities in the treatment of hiccough:

℞ Strych. sulph. ..... gr. 1/4 | .015
Spts. chloroformis. ..... m. x | .65
Alcoholis ..... ℥vi | 24
Tinct. capsici ..... m. xii | .005
Aquæ q. s. ad ..... ℥i | 30

M. Sig.: One teaspoonful in a tablespoonful of water and repeated two or three times during the day; or:

℞ Sodii bicarb. ..... ℥iv | 15
Tinct. nucis vom. ..... ℥i | 4
Spts. chloroformi ..... ℥ii | 8
Tinct. capsici ..... ℥i | 4
Tinct. gentianæ co. ..... ℥iii | 90

M. Sig.: One teaspoonful after meals, in cases of gastric or intestinal disturbance; or:

℞ Chloralis hydratis ..... gr. xx | 1 | .30
Potassii bromidi ..... ℥ii | 8
Mucilag. acaciæ ..... ℥iv | 120

M. Sig.: To be given at one dose by rectum.

When there is hypochondriasis or hysteria as a primary cause, the following combinations after Beasley are of value:

℞ Moschi ..... gr. v | .30
Zinci valerianatis ..... gr. v | .30
Asafetidæ ..... gr. iii | .20

M. Ft. capsula No. i. Sig.: One such to be taken twice daily; or:

℞ Tinct. moschi ..... m. xxx | 2
Tinct. sumbul ..... m. xxx | 2
Tinct. cannabis ind. ..... m. v | .30
Tinct. ammon. valer. ..... m. xxx | 2
Mucil. acaciæ ..... ℥i | 4
Aq. chloroformi q. s. ad ..... ℥i | 30

M. Sig.: To be taken at one dose and repeated once during the day; or:

℞ Moschi ..... gr. v | .30
Mucil. acaciæ ..... ℥ss | 2
Spts. chloroformi ..... m. xv | 1
Aquæ cinnamomii q. s. ad ..... ℥i | 30

M. Sig.: One such dose every four hours in extreme cases.

Malarial Hemoglobinuria.

W. E. Sparkman, in *Ther. Gazette*, recommends the follow-

ing in the treatment of cases of malarial hemoglobinuria accompanied by severe symptoms, such as nausea, vomiting, high temperature, repeated chills and weak heart, jaundice and a suppression of urine.

℞. Sodii sulphitis .....℥ii 60
Aq. cinnamomii q. s. ad.....℥viii 240

M. Sig.: One tablespoonful every three hours until the jaundice begins to clear and the urine becomes normal.

For nausea and vomiting he recommends brandy on crushed ice or the application of mustard to the epigastrium and the following internally:

℞. Bismuthi subnit. 3ii 8
Cerii oxalatis 3ii 8
Acidi carbol. 3ss 2
Mucil. acaciæ q. s. ad.....℥iv 120

M. Sig.: Two teaspoonfuls in ice water every three hours. Ergot should never be given, according to the writer, as it favors clot and suppression of urine. If the fever is high and there is great restlessness Sparkman recommends the following:

℞. Potassii bromidi 3ii 8
Spts. etheris nitrosi 3ii 8
Chloralis hydratis 3ii 8
Acetanilidi .....gr. xl 2|65
Elix. simplicis q. s. ad.....℥iv 120

M. Sig.: One tablespoonful every two or three hours until quiet is obtained.

[The amount of acetanilid in this prescription is five grains to the dose—a dangerous amount to give at intervals of two or three hours.—ED.]

For partial or complete suppression of urine, acetate of potassium with infusion of digitalis in "watermelon seed" tea is the best diuretic. This is aided by the high rectal injection of a hot normal salt solution.

As long as the urine remains bloody, the following is of value:

℞. Tinct. digitalis 3iv 15
Tinct. ferri chloridi.....3iv 15
Ammon. muriatis 3i 4
Elix. simplicis q. s. ad.....℥iii 90

M. Sig.: One teaspoonful in ice water every three hours.

If this should be rejected it should be repeated at once.

To guard against heart failure strychnin should be given, gr. 1/30 to 1/40 (.002-.0015) every three or four hours in whisky or brandy. Lemonade is regarded as a good diuretic and allays thirst. The author recommends also raw, ripe tomatoes as of great value in relieving nausea and in allaying the irritability of the stomach. After the urine has cleared for thirty hours, he cautiously begins on quinin and stops it if there is any sign of recurrent hemorrhage. During convalescence he recommends the following:

℞. Quin. sulph .....gr. ii |12
Ferric sulph. .....gr. ii |12
Strych. sulph. .....gr. 1/40 |0015
Ext. gentianæ .....gr. 1/4 |015

M. Ft. pil. No. i. Sig.: One such pili three times daily.

Chronic Dyspepsia in Infants.

The preparation most commonly used at the outset in the treatment of chronic dyspepsia, according to Hutchison, are alkalies and aperients. The latter are of use, no matter whether constipation is present or not. Their usefulness may be accounted for on the excessive production of mucus theory, as they are regarded as good solvents of mucus and they also assist in getting rid of that mucus already dissolved. In this connection he recommends the following combination:

℞. Potass. bicarb.
Potass. citratis, āā.....gr. v |30
Tinct. nucis vom. .....gtt. i |06
Infus. gentianæ co. 3ii 8

M. Sig.: To be given at one dose in a little water and the dose repeated fifteen minutes before meals.

The potassium bicarbonate is said to dissolve the mucus. The citrates are given as these children often have thick urine and pass an increased amount of urates. The nux vomica increases the appetite, as also does the gentian. The author prefers as an aperient, in the beginning, one that contains calomel and rhubarb, as follows:

℞. Pulv. rhei .....gr. viii |50
Sodii bicarb. .....gr. x |65
Hydrarg. chloridi mitis cum creta...gr. i-ii |06-.12

M. Ft. pulvis No. i. Sig.: One such powder every night or every other night, and the amount increased or reduced to suit the age of the child. The author prefers rhubarb because of its astringent as well as of its aperient action. It has a tonic effect on the flabby mucous membrane. The sodium bicarbonate is added to dissolve the mucus.

After two weeks great improvement will be noticed and tonics should then be prescribed, including iron in some form. But the iron and tonics must be deferred until the tongue is clean and the stomach in good condition. It is a great mistake to treat these patients early with cod-liver oil. In some cases, gastric pain is a troublesome symptom and may require opium to control it. The best preparation is Dover's powder, given in two or three-grain (.12-.20) doses. If lienteric diarrhea be present, small doses of opium given before meals constitute the best treatment, giving perhaps two minims (.12) of the tincture combined with a drop of liquor potassii arsenitis and a little nux vomica. By this treatment, peristalsis is kept in abeyance when food is introduced into the stomach. If headache be present, the eyes should be refracted.

Medicolegal

Undue Prejudice Not Insane Delusion.—An undue prejudice based on some reason, the Supreme Court of Nebraska holds, *in re* Clapham's estate, is not an insane delusion.

When Husband Not Liable for Services.—The Supreme Court of Wisconsin reverses, in the case of Morgenroth vs. Spencer, a judgment on a verdict directed for the plaintiff for professional services performed by the plaintiff, a physician, for the wife of the defendant. It says that when the defendant's wife deserted him without cause, and continued to live apart from him without his consent, she did not take with her the defendant's credit. Her misconduct deprived her of power to bind her husband, and it was incumbent on the plaintiff to prove her authority, in order to make out a case against the defendant. *Prima facie*, a woman living separate and apart from her husband has no power to bind him, and it is incumbent on the person furnishing necessaries to a wife so living apart from her husband to show that she is so living for justifiable cause. In the case at bar, if the wife of the defendant was living separate and apart from him without cause and without his consent, and he did not authorize the employment of the plaintiff, the plaintiff could not recover from him for the services. It was a question for the jury to determine whether a rupture had taken place between husband and wife, of such a nature as to deprive her of authority to pledge his credit for necessaries supplied. The action being for necessaries furnished to the wife, the general rule applied that the testimony of the wife is admissible in an action brought against the husband to recover for such necessaries.

Liability of Physician and Surgeon for Malpractice.—The First Appellate Division of the Supreme Court of New York says, in the malpractice case of MacKenzie vs. Carman, that the liability of a physician and surgeon to a patient is based on two obligations which he assumes in undertaking the care of a patient. The first is that he possesses "that reasonable degree of learning and skill which is ordinarily possessed by physicians and surgeons in the locality where he practices, and which is ordinarily regarded by those conversant with the employment as necessary to qualify him to engage in the business of practicing medicine and surgery"; and the second is that he undertakes to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed, and he is "to use his best judgment in exercising his skill and applying his knowledge," and he is liable for an injury "to his patient resulting from want of requisite knowledge and skill, or the omission to exercise reasonable care, or the failure to use his best judgment." The law thus requires a surgeon to possess

the skill and learning which is possessed by the average member of the medical profession in good standing, and to apply skill and learning with ordinary and reasonable care. He is not liable for a mere error of judgment, provided he does what he thinks is best after a careful examination. He does not guaranty a good result, but he promises by implication to use the skill and learning of the average physician, to exercise reasonable care, and to exert his best judgment in the effort to bring about a good result.

No Damages for Disfigurement.—The United States Circuit Court of Appeals, Eighth Circuit, says, in Southern Pacific Company vs. Hetzer, a personal injury case brought by the latter party, that, in some states, notably in Wisconsin and Michigan, evidence of mental pain caused by disfigurement, apart from the physical suffering produced by an injury, is admissible to enhance the damages in an action for personal injury. The rule which has been adopted by this court, however, and the rule which seems to it the better one, is that in actions for personal injury the plaintiff may recover for the bodily suffering and the mental pain which are inseparable and which necessarily and inevitably result from the injury. But mortification or distress of mind from the contemplation of the crippled condition and of its effect on the esteem of his fellows, that mental pain which is separable from the physical suffering caused by the injury, is too remote, indefinite, and intangible to constitute an element of the damages in such a case, and evidence of it is inadmissible. Mental pain of this character, the suffering from injured feelings, is intangible, incapable of test or trial. The evidence of it, like that which convicted the alleged witches, rests entirely in the belief of the sufferer, and it is not susceptible of contradiction or rebuttal. Many other causes, the education, temperament and sentiment of the sufferer, the mental attitude, the acts and words, of his friends and acquaintances, concur with the accident to cause this mental distress, in such a way that it is impossible to separate and ascribe the proper part of it to the injury caused by the defendant. And the amount of the mental pain caused by any disfigurement necessarily varies so with the character, temperament and circumstances of the injured person that no just measure of the damages from it can be found. Such mental suffering is too remote, intangible, and immeasurable to form the basis of any just adjudication, and the objections to the testimony of the plaintiff concerning it should have been sustained.

Enforceability Against Estate of Contract Between Physicians.—The Supreme Court of Missouri, Division No. 2, says that in the case of Rosenwald vs. Middlebrook, administrator, and others, the plaintiff sought to have a court of equity enforce specific performance of a contract alleged to have been made with the defendants' intestate, a physician, during his lifetime, whereby it was claimed that, in consideration of certain acts and services to be performed by the plaintiff, the physician was to leave to him his entire estate. But in order to have justified the chancellor in decreeing a specific performance of this contract, it was absolutely essential, the court says, that it should, first, be made to appear to him that the contract was in fact made, by proof so cogent, clear, and forcible as to leave no reasonable doubt in the mind of the chancellor of its terms and character; second, it was equally essential to show that such contract was made on a valuable consideration, and that a fraud would be perpetrated on the plaintiff unless the contract be performed; third, on the allegations in the petition the consideration of the contract sought to be enforced was predicated on the acts to be performed by the plaintiff, and therefore it was essential that the proof should satisfy the chancellor that the facts performed referred to and resulted from that contract, and were such acts as would not have been done unless on account of the very contract made, and with a direct view to its performance. Furthermore, here being a young practicing physician, entering into a partnership with the head of a medical school, who stood high in his profession, with elaborately furnished offices, with all the modern conveniences, the court is not willing to say that the formation of this partnership was any sacrifice of professional standing or business interests on the part of the plaintiff, although it might be said, from a moral standpoint, that the decedent did not measure up to the standard that would ordinarily be required in selecting a partner. That he attended to all of the correspondence, the business connected with the offices, looked after the wants of the senior partner, cared for him when indulging excessively in intoxicants, the court thinks, were not acts anything out of the usual order, or which would not be expected to be performed by a young practicing physician who had entered into a partnership with an older physician of such marked ability and prestige.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

May 20.

1 *Remarks on Mitral Stenosis. F. P. Henry, Philadelphia.
2 *Artificial Dilation of the Cervix in Obstetrics. R. C. Norris, Philadelphia.
3 *Graves' Disease and Parathyroid Therapy. J. J. Walsh, New York City.
4 Surgical Treatment of Prolapus Uteri, with Special Reference to the Operation of Colpectomy. C. G. Cumston, Boston.
5 Infection of the Urinary Tract by the Colon Bacillus, Simulating Uremia. J. R. Arneill, Denver.
6 *Intestinal Obstruction. D. F. Talley, Birmingham.
7 *New Asiatic Blood Fluke (Schistosoma Japonicum, 1904; Schistosoma Cattoi, 1905) of Man and Cats. C. W. Stiles, Washington, D. C.
8 *Hospital and Dispensary in the Warfare Against Tuberculosis. L. F. Flick, Philadelphia.
9 *Working Program for Associations for the Prevention of Tuberculosis—National, State and Local. E. T. Devine, New York.

1. **Mitral Stenosis.**—Henry says that the diagnosis of mitral stenosis in the first stage is comparatively easy. At that time there is a presystolic murmur easily recognized as such by the fact that it is followed by the first and second sounds, both audible at the apex. The second stage is indicated by disappearance of the second sound at the apex, this being due to dilation and hypertrophy of the right ventricle and to feeble propulsion of blood into the aorta. The presystolic murmur continues. According to the literature, the onset of the third stage is, in contradistinction to this, marked by disappearance of the presystolic murmur and by the establishment of signs of tricuspid regurgitation. Henry has found that it is only exceptionally that the presystolic murmur disappears with the onset of signs of tricuspid regurgitation. Again and again he has heard a typical low-pitched, rumbling, presystolic murmur, coinciding with pulsation in the veins of the neck, a few hours before the death of the patient. Another phase of mitral stenosis which he emphasizes is an extreme arrhythmia—a veritable delirium cordis—which may persist without intermission for months or even for years. In such cases, there is no murmur, and in them it is impossible to distinguish the sounds from each other. The arrhythmia may continue indefinitely and may constitute the chief expression of the lesion. The clinical syndrome of these cases is the following: Marked anemia, with somewhat dusky skin and cyanotic lips; a tendency to bronchial catarrh, marked periods of improvement, with little or no diminution of the arrhythmia, and no edema whatever, or none until shortly before death.

2. **Artificial Dilation of the Cervix in Obstetrics.**—According to Norris, the value of any method of artificial dilation should be measured by its power to evoke uterine contraction and thus to promote effacement of the internal os. He concludes as follows: 1. The necessity for the induction of a premature labor by a method requiring less than 12 hours, is extremely rare. 2. The method most frequently employed, and most satisfactory in his experience, is a combination of partial mechanical dilation, followed immediately by the insertion of a bougie and an extraordinarily large Voorhees' bag incompletely filled. 3. For the relatively rare cases in pregnancy or labor requiring accouchement forcé, the choice of rapid mechanical dilation depends especially on the character of the cervix, the general state of the patient, and the

firm determination not to attempt too rapid dilation. Bossi's or De Seigneux's instrument is cleaner, is less tiresome, is applicable to the same class of cases, and is not more dangerous than manual forcible dilation. 4. Duhrssen's vaginal section is a most valuable operation in the hands of an expert obstetric surgeon, and should be preferred to rapid metallic dilation, except when conditions favorable to the latter are unmistakably present. 5. For the treatment of the grave forms of placenta prævia and of accidental hemorrhage, Duhrssen's hysterotomy, in the hands of an expert vaginal operator, should prove the best method of treatment ever offered.

3. **Graves' Disease and Parathyroid Therapy.**—Walsh reports four cases of Graves' disease treated with desiccated parathyroids. In two mild cases, the remedy seemed to produce a good effect. In two severer cases, the remedy failed utterly to give relief, and in one case seemed to cause an exacerbation of the symptoms somewhat as if thyroid extract were being given. It is not absolutely certain that the parathyroid material was absolutely free from all admixture with thryoid substance, though it was very carefully prepared for these cases.

6. **Intestinal Obstruction.**—Talley emphasizes the fact that in acute cases the life of the patient depends on early recognition of the obstruction and prompt surgical intervention. He advises that when a patient suffers extreme pain in the abdomen, especially in the epigastrium, which is not relieved by an ordinary dose of morphin, when he vomits and his bowels do not respond in 10 to 15 hours to the usual purgatives and enemas, intestinal obstruction should be diagnosed; the error then will be on the side of safety for the patient.

7. **New Asiatic Blood Fluke.**—Stiles calls attention to the fact that the newly described Chinese blood fluke (*Schistosoma cattoi* 1905) may be identified with a fluke (*S. japonicum* 1904) described for man and cats in Japan. The new species is characterized by the absence of spinose warts on the male, and the absence of spines on the egg, while the African blood fluke (*S. hæmatobium*) has spinose warts on the male and a terminal or subterminal spine on the egg. Clinically, in cases of infections with the African fluke both vesical and rectal symptoms have been reported, but all reported infections with the new Asiatic fluke have thus far been intestinal. Another important clinical point is the possibility that some of the cases of cerebral distomatosis, heretofore attributed only to the lung fluke (*Paragonimus westermanii*) may possibly be due to the new Asiatic blood fluke.

8. **Hospital and the Dispensary in the Warfare Against Tuberculosis.**—Flick says the great preventive influence of hospital treatment in pulmonary tuberculosis is due to the isolation of the patient during the time when the disease is most contagious and he is least able to help himself. During the last stage of the disease it is very difficult to keep a consumptive clean, and the frequent changes of linen, which are necessary, make the process too expensive to be practiced in the homes of the poor. In the hospital, the patient can be taken through his exacerbations and even through the terminal stage without danger to others, and without too great an expense, by reason of the discipline which exists. Hospitals form schools and propaganda for the spread of knowledge about the disease. Next to the hospital the dispensary undoubtedly is the most available and the most potent weapon in the warfare against tuberculosis. The two work well together because they are adapted for the early ambulatory cases and the advanced helpless cases. For ambulatory cases, the dispensary gives every facility for successful treatment.

9. **Prevention of Tuberculosis.**—Devine advises the adoption of a definite program in the fight for the prevention of tuberculosis. It should have at least ten features: 1. The maximum of sunlight and fresh air should be obtained for all mankind at work, at leisure, and at sleep. 2. An abundance of simple, and yet sufficiently varied nourishing food—pure milk and fresh eggs. 3. Early diagnosis of every case of pulmonary tuberculosis by the family physician, and the utmost attempt to secure compliance with his advice as to medical treatment and diet, change of work, or complete release from regular employment, change of residence, or removal to a hospital or sanatorium—such advice to take into account all the circumstances of the individual patient. 4. Registration of all cases irrespective of condition in life. 5. The establishment of institutions which will best serve the purpose for advanced cases. 6. The establishment, on a generous scale, of state, municipal and private sanatoria for treatment of patients in the earlier stages. 7. Publicity regarding means of preventing infection and in regard to the other elementary rules of hygiene, through every known channel of public instruction. 8. Conferences for interchange of views and experiences among those who are working for the prevention of tuberculosis. 9. Relief in various forms, especially in the form of special diet for those who can and must be treated at home. 10. Further research. We need more knowledge, better authenticated records, further comparison of results, more accurate knowledge—for these we must have laboratories, endowments, favorable conditions for scientific research, travel for observation and study abroad, and training for fruitful investigation.

Boston Medical and Surgical Journal.

May 18.

10 Satisfactory Prostatectomy. B. Tenney, Boston.
11 *Paramount Value of Localized Râles as a Sign of Incipient Phthisis. H. B. Whitney, Denver, Colo.
12 Therapeutic Value of Some Digestive Preparations, and the Indications for the Use of Pepsin in Diseases of the Stomach. R. F. Chase, Boston.
12½ *Infections of the Respiratory Tract with Influenza Bacilli and Other Organisms; Their Clinical and Pathologic Similarity and Confusion with Tuberculosis. F. T. Lord.

11. **Value of Localized Rales as a Sign of Incipient Phthisis.**—According to Whitney, the great and predominant value of localized râles in the diagnosis of incipient tuberculosis consists, first, in their almost constant presence at a time when other local signs are absent or, at most, indefinite. Second, in their practically unmistakeable character, thus differing widely from other signs which represent merely deviations from the normal. Third, in the fact that when occurring at an apex they are almost pathognomonic, other conditions which might produce them being exceedingly rare. While, therefore, other local signs are of great value, especially for the few experts who by long experience have learned their limitations and the frequent difficulty of interpretation, the presence of localized râles must remain the essential guide to early diagnosis for the rank and file of the profession.

12½. **Infections of the Respiratory Tract.**—Of the 186 nontubercular infections of the respiratory tract observed clinically by Lord (for the most part bronchitis), a mixed infection with various organisms was found in 120 cases (64 per cent.); a comparatively pure infection with one group of organisms was found in 66 cases (36 per cent.). Of these pure infections, those due to influenza bacilli comprise the largest group, with fewer cases of pure infection with the pneumococcus, etc. The pure infections, however, tend to become mixed as the case progresses, and the observer must then remain in doubt—in the presence in the sputum of two or more groups of organisms—as to the relative importance of any one of the infecting agents. In the clinical picture, the symptoms of onset, and the course and duration of the different pure infections, there seems to be nothing distinctive. They all tend to set up diffuse or local bronchitis and a varying degree of bronchopneumonia. The amount of prostration may be as great in one as in the other. The pathologic picture in cases of bronchopneumonia due to the different organisms, likewise seems to be similar in the character of the exudate, its varying extent and intensity, and the tendency, in a small proportion of cases, to end in permanent damage to the pulmonary substance. These results of pulmonary invasion are not infrequently mistaken clinically for pulmonary tuberculosis. Of eighty-five cases of pneumonia, associated with various organisms, well-marked localized pulmonary abscesses or duration or both, were found in eight. No tuberculosis could be demonstrated at autopsy. From the clinical resemblance of such cases to pulmonary tuberculosis, the presence of the tubercle bacillus in the sputum must be regarded as the only infallible indication of this condition.

Medical Record, New York.

May 20.

13 *Cystoscopy and Renal Lavage. F. M. Johnson, Boston, Mass.
14 *Disorders of the Nervous System Arising in the Course of Chronic Nephritis. W. M. Leszynsky, New York.
15 *Treatment of Eczema and Impetigo in Children. C. W. Allen, New York.
16 Relation of the Medical Profession to the Restriction of Tuberculosis. S. P. Wise, Millersburg, Ohio.
17 *Case of Hodgkin's Disease with but Slight Enlargement of the Superficial Lymph Glands. H. F. Stoll, Hartford, Conn.
18 Ventral Decubitus as an Aid to Drainage for Diffuse Purulent Peritonitis. R. M. Harbin, Rome, Ga.

13. **Cystoscopy and Renal Lavage.**—The object of Johnson's paper is to set forth the indications demanding cystoscopy and renal lavage, the rules that it is wise to observe in preparing for the cystoscopy, the description of the *modus operandi*, and the difficulties likely to be encountered in the procedure. The indications for and the conditions governing treatment are the following: 1. From microscopic examinations of the mixed urine, and from the clinical history of the case, information justifying the procedure is obtained 2. A consideration of the nervous and physical condition of the patient will teach us whether interference must be immediate or whether measures to render the operation less painful may first be employed. 3. The eradication of all conditions tending to interfere with the use of the cystoscope, such as stricture, enlarged prostate, sensitive urethra, or an irritable bladder. 4. The condition of the heart must receive special attention, for often surgical shock plays an important postoperative part. Lavage of the kidneys consists in the direct application of some preparation, such as boracic acid solution containing silver nitrate, in strength of from 1-12,000 up to 1-7,000, or .5 of 1 per cent. of one of the organic silver salts, a healing oil, an astringent, or a hemostatic. There are no standard solutions; experience is the teacher, and conditions found, the guide. Only a small amount, from 15 to 30 minims, should be injected at any one time; a total of from one to four ounces can be used at each lavage of both kidneys. Each catheter is then removed in turn, a good plan being constantly to inject some of the fluid during withdrawal, as then the whole urinary tract is influenced and receives a thorough washing-out.

14. **Disorders of Nervous System in Chronic Nephritis.**—Leszynsky emphasizes the well known but deplorable fact that many of the seemingly insignificant or apparently trivial symptoms which arise in the course of unrecognized chronic nephritis do not, as a rule, receive the attention that their gravity merits. Aside from the various neurasthenic manifestations occurring in the patients with chronic nephritis, many of the transitory subjective nervous phenomena arising during the course of the disease are the result of uremic (or possibly other) intoxication in varying degree, while nearly all of the transitory objective nervous phenomena, and the more permanent and incapacitating or fatal complications, are primarily due to the concomitant arterial disease. Hence, palpable evidence of arteriosclerosis and of high blood pressure is usually of the greatest significance. The many forms which the nervous disturbances attendant on nephritis assume are described in detail, and several illustrative cases are cited in which the failure to recognize the uremic condition underlying symptoms apparently of nervous origin led to serious results.

15. **Eczema and Impetigo in Children.**—Allen says that, although many cases of infantile eczema depend on improper feeding and faulty digestion or assimilation, the majority are susceptible of cure by local measures alone. A judicious combination of restricted or regulated diet, internal measures, when indicated, and external application will usually result in rather prompt cure. The treatment of any case must depend largely on the view taken of the origin and nature of the affection. The indications are usually to soothe and to protect a highly inflamed pruriginous area, to destroy germs, and to act in deeper infiltrations and dilated vessels. In general, it may be said that symmetry of lesion speaks for constitutional origin, asymmetry for local cause. Among general local measures to fulfill the objects of disinfection, protection, soothing, and favoring the growth of new epidermis, the use of methylene blue solution is especially advocated. A 3 to 5 per cent. watery solution is allowed to dry in well, and a thin layer of collodion is quickly applied. Nitrate of silver, in from 5 to 20 per cent. strength, salicylic acid, resorcin, sulphur, ichthyol, etc., are also recommended and the indications for their use in different cases described. A favorite prescription is: Resorcin, .5 to 1 per cent.; washed sulphur, 2 to 4 per cent.; lanolin, 5 to 10 per cent., and lard up to 100. Impetigo contagiosa, according to the author, is frequently associated with pediculosis capitis, and in treating it the parasites should be sought for. Crusts are to be removed with potato flour poultices and 10 per cent. ammoniated mercury ointment applied, or green soap solution, followed by 1-1,000 bichlorid of mercury. Ichthyol, salol, betanaphthol, surphur and red sulphid of mercury are also useful in some cases. As a rule, however, ointments are not so good as washes.

17. **Case of Hodgkin's Disease with but Slight Enlargement of the Superficial Lymph Glands.**—In the case reported by Stoll, the following points seem of especial interest: 1. The development of acute symptoms associated with an eruption nearly four years after the beginning of the disease. 2. The slight involvement of the superficial glands. 3. the occurrence of periodical abdominal distention and tenderness. 4. The alternating periods of pyrexia and apyrexia. 5. The unusually severe anemia. 6. The disappearance of the glands before death. The general characteristics of the disease are discussed at length, and in regard to treatment it is stated that improvement of the nutrition by the rest cure and an abundance of fresh air is very important. Arsenic, in the form of Fowler's solution, should be given in relatively large doses. The glands should be exposed to the *x*-rays for a long period, and the earlier such treatment is begun the better will be the results. Removal of the glands is to be resorted to only when pressure symptoms are marked.

New York Medical Journal.

May 20.

19 *Metacarpal Fissure, a Fracture Type Not Heretofore Described, and Some Points Regarding Treatment of Metacarpal Fracture. C. Beck, New York.
20 *Successful Method of Treating Fracture of the Femur in Infancy. W. G. Stern, Cleveland.
21 *Puberty and Adolescence in Their Relation to the Etiology of Epilepsy. W. B. Spratling, Sonyea, N. Y.
22 Syphilis with Late or Absent Secondary Eruption. R. N. Willson, Philadelphia.
23 *Recognition and Differentiation of Râles in the Lung. F. E. Beal, New York.
24 *Alkaline Beverages in the Treatment of Pneumonia. J. B. Todd, Syracuse, N. Y.
25 Virginia Laws Regulating the Sale of Poisons. G. E. Barksdale, Richmond, Va.
26 Diagnosis and Treatment of Typhoid Fever. W. Jones, Atlanta, Ga.

19. **Metacarpal Fissure.**—Beck points out that a large number of the so-called dislocations and contusions of the metacarpal region are in reality fractures, and that this has been established positively by the Roentgen ray.

20. **Fracture of Femur in Infants.**—Steven describes a method of treating fracture of the femur in the newborn and in children up to the age of two years which, in his experience, has proved entirely satisfactory. It enables the mother to nurse the child with very little effort, and enables her to keep the child scrupulously clean; it holds the fragments in apposition without subsequent deformity; allows only a minimum amount of shortening, and there is freedom from pain on moving the child for necessary changes of clothing, etc. For the first three days, enough fixation is secured to keep the child quiet by bundling it in a feather pillow. After the third day, the limb is placed in vertical extension and kept there for at least three weeks. The child rests on a pillow placed on a low stand next to the bed and should not be above the level of the mattress. Its body is parallel to the length of the bed and its head at about the position of the mother's breast. The adhesive straps for the extension are put on in the usual fashion, after the skin has been thoroughly cleansed with alcohol and ether, and should reach well up over the trochanter. Zinc oxid plaster should always be used, as it is far less irritating to the delicate skin; by using sterilized zinc oxid adhesive plaster, the extension can be left

unchanged for the entire three weeks; an adhesive plaster which lacks at all in "stickiness" and is liable to slip, can not be used. It is impossible in these small limbs to get the extension straps to stay unless they are bound down by circular turns around the malleolus, the top of the tibia, the condyles of the femur and the groin; care should be exercised not to get the circular turns too tight, as that might lead to venous stasis. The groin and buttocks are next carefully bandaged with a two-inch bandage of oiled silk, held in place by adhesive strips; next a flannel bandage is carefully applied from the toes to the groin to keep the leg warm, and this again is protected by an oiled silk bandage reaching from the knee to the groin. No spica turns about the pelvis are to be used. The extension is carried upward with wire to a hook firmly fastened into the ceiling, then over for three or four feet, so as to get the weight away from the baby, and then down over another hook for a foot or two, where the weight is placed out of reach of either head or hands. Half of a five pound bag of salt is the best form of weight; it is cheap, can be easily fastened, and the weight can be changed at will by adding or taking out salt. In all cases the weight should be just enough to lift the buttock off the pillow.

21. **Puberty and Adolescence and Epilepsy.**—Spratling summarizes his paper as follows: 1. That we can, and must, in many cases of epilepsy that appear from the twelfth to the sixteenth and eighteenth years, coincident with the establishment of the menstrual flow in women, and with the passing of boyhood into manhood, ascribe to these changes the power of inducing well-defined convulsions that may be epileptic. 2. That except in the most remote and exceptional instances, these periods alone in normal individuals have no power to induce epilepsy, or even epileptoid phenomena. 3. That by searching carefully we shall find in most cases of epilepsy at this period, either a previous history of convulsions, usually in infancy, or a family and personal history so tainted with a tendency to disease that epilepsy under the stress of puberty is plainly invited.

23. **Recognition and Differentiation of Rales.**—For the purpose of a more simple differentiation and recognition of râles, Beal proposes to divide râles heard in the lung into two classes, the dry and the moist. He points out that the principal distinction between a dry and a moist râle is, that a dry râle has always some duration, while a moist râle is always instantaneous.

24. **Alkaline Beverages in Pneumonia.**—In order to promote leucocytosis throughout the course of the disease and to preserve the proper alkalinity and specific gravity of the blood, Todd advises the administration of alkaline saline drinks, from the inception of the disease throughout its entire course. Of a solution of two and one-half grains of sodium chlorid and one grain of potassium bicarbonate to the ounce of cold water, from six to eight ounces should be given every two hours. The addition of a teaspoonful of lemon juice converts it into a refreshing effervescent drink. A generous diet, a well-lighted room and an abundance of oxygen are essential. Todd says that the administration of alcohol, strychnin and the so-called heart tonics in pneumonia is analogous to sustaining a starved horse with a whip when he fails to draw his load. He does not condemn these remedies absolutely, but says that in his opinion there has been no occasion for their use.

Medical News, New York.

May 20.

27 *Recent Advances in Our Knowledge of the Chemical Processes of Digestion. L. Mendel, New Haven, Conn.
28 Laennec and His Stethoscope. C. N. B. Camac, New York.
29 *Recent Advances in the Knowledge of the Movements and Innervation of the Alimentary Canal. W. B. Cannon, Boston, Mass.
30 *Case of Pneumococcus Infection of the Hip. L. W. Ely, New York.
31 Pneumonia—Etiology and Epidemiology. E. F. Wells, Chicago.
32 Remarks on the Proper Cleansing of a Running Ear. H. A. Alderton, Brooklyn, N. Y.

27. **Chemical Processes of Digestion.**—In this paper Mendel refers to facts of historical interest, and reviews present day knowledge on this subject.

29. **Movements and Innervation of the Alimentary Canal.**—Cannon discusses the mechanical activities of the different portions of the alimentary canal—esophagus, stomach, small and large intestine, and the sphincters, and also the extent to which these movements are independent of the central nervous system, and the manner in which they are affected by their connection with that system.

30. **Pneumococcus Infection of Hip.**—In Ely's case, the hip trouble came on about two weeks after an attack of pneumonia. It became necessary to open the joint, and the examination of the pus evacuated revealed the pneumococcus. The patient finally succumbed to an empyema.

St. Louis Medical Review.

May 13.

33 *Irrational Surgery, or Surgery Gone Mad. B. Robinson, Chicago.

33. **Irrational Surgery.**—Robinson discusses what he terms the extent of practice of several notorious fad operations. He says modern surgery appears to have delegated to itself unlicensed liberty to invade with impunity any and every organ. Some of the operations mentioned in this connection are oöphorectomy, trachelorrhaphy, the various "pexies," the use of the dilator and curette, gastroenterostomy, the appendicectomy fad, the varicocele fad, and the ocular myotomy fad. He says that hysteropexy is practically an unnecessary, irrational operation, and that it is an unsafe surgical procedure accompanied by disastrous and fatal issues. Numerous postmortems and dangerous surgical interventions have been the final story of hysteropexy. The other operations referred to are discussed in a similar manner.

Lancet-Clinic, Cincinnati.

May 13.

34 Ptosis of Abdominal Viscera. F. L. Rattermann, Cincinnati.
35 *Report of a Case of Popliteal Aneurism Treated by Arteriorrhaphy. H. O. Pantzer, Indianapolis.
36 Digestive Disturbances—a Clinical Study. J. H. Schroeder, Cincinnati.
37 *Radical Cure of Hernia. H. C. Wyman, Detroit.
38 *Radium—Its Value in Medicine. M. Metzenbaum, Cleveland.

35. **Arteriorrhaphy for Aneurism.**—Pantzer made use of simple arteriorrhaphy in a case of traumatic saccular aneurism of the popliteal artery, following a gunshot wound, which finally ruptured. Because of certain conditions present, the opening in the artery was sewed somewhat transversely, as is done in the Mikulicz-Heinecke operation for stenosis of the pylorus. Previous to operation the patient had pyelitis and cystisis, which became worse and finally caused the patient's death. The portion of the popliteal operated on was resected and showed a perfect closure of the opening. The caliber of the artery was actually wider at the seat of suture than above and below. Pantzer concludes as follows: 1. That traumatic aneurism is amenable to suturing. 2. That even much atheromatous degeneration of the artery wall does not necessarily contraindicate suture, at least as a temporary expedient. 3. That fortifying folds of the aneurismal sac are not absolutely necessary. 4. That early surgical interference in these cases seems clearly indicated.

37. **Radical Cure of Hernia.**—Wyman's paper emphasizes the importance of including in operations for the radical cure of hernia measures tending to reduce the volume of the abdominal contents and to increase the size and strength of the abdominal walls, and all operations having this end in view are commendable. The suture material used by him in hernia cases is linen No. 35. It stands sterilization better than other material, readily becomes encysted and never works out after tardy and tedious suppuration. Dressings are rarely disturbed until healing is complete. Wyman says that it is surprising what changes can be wrought in diminishing intra-abdominal pressure after operations for hernia by radical changes in food.

38. See abstract in THE JOURNAL, Oct. 29, 1904, p. 1327.

American Journal of Obstetrics and Diseases of Women and Children, New York.

May.

39 *Technic of Abdominal and Vaginal Operations for the Relief of Fibromyomatous Tumors of the Uterus. J. R. Goffe, New York.

40 Care and Feeding of Premature Infants. J. L. Morse.
41 Sarcoma of the Uterus, with Remarks on Radiotherapy. H. Grad, New York.
42 *Persistent Mentoposterior Positions. C. B. Reed.
43 *Yeast Treatment of Acute and Chronic Vaginitis and Endocervicitis. H. Schiller, Chicago.
44 *Vaginal Atresia Complicating Labor. J. C. Hirst, Pennsylvania.
45 Secondary Metastatic Implantation of Carcinoma in the Vagina. E. A. Schumann, Philadelphia.
46 Hematoma of the Ovary. M. A. Tate, Cincinnati, Ohio.
47 The Uterine Curette. H. A. Kelly, Baltimore.

39. **Relief of Fibromyomas of Uterus.**—In 1888, Goffe first published his modification of Schroeder's operation for the removal of uterine tumors. The technic of this operation has been improved somewhat, and as performed to-day is as follows: After opening the abdominal cavity, and while the tumor is still *in situ*, the ovary and tube on one side are drawn up, and a ligature is passed through the upper border of the broad ligament and tied; thus controlling the ovarian artery. One end of this is rethreaded into the pedicle needle, and the broad ligament is transfixed a second time near to the tumor and just above the uterine artery; this is also tied. A temporary ligature is now placed near the horn of the uterus to control any reflex hemorrhage from the tumor. The broad ligament is cut down to the lower point of transfixion, and the tumor is then rotated and the same method pursued on the other side. The tumor is then delivered through the wound, and the lower angles of the incisions through the broad ligaments on either side are connected by an oval incision through the peritoneum, first across the anterior and then across the posterior surface of the tumor. Flaps are then dissected down, the one in front carrying the bladder and ureters into safety. One end of the ligature is again threaded into the pedicle needle and is passed inside these peritoneal flaps close to the cervix and below the uterine artery. This is repeated on the opposite side and the ligatures cut short. The tumor is then cut away on a level with the internal os. The cervical canal is disinfected with applications of carbolic acid. The flaps are then stitched together with a running catgut suture over the top of the stump, care being taken to make them cover all the ligatures on either side. Goffe uses catgut ligatures on the broad ligaments and also for stitching the flaps. The advantage of using a single ligature for each broad ligament is that it puckers up the end of the ligament and carries it down alongside of the cervix, so that the raw surface is very easily covered by the peritoneal flaps. In a general way, the advantages of this operation and the superiority over the method of total extirpation consist in the following points: 1. It involves the least possible loss of blood; indeed it is rare for any hemorrhage to occur. 2. It is easy of execution, for the reason that the stump of the cervix can be brought up near to the abdominal wound and the details of disposing of the traumatic tissue carried on with ease and comfort to the surgeon. 3. It is applicable in its general plan to all cases of fibroid tumor. 4. It requires less time than total extirpation. 5. Convalescence, as a rule, is rapid and free from complication, moreover, the patients require no special after treatment whatever. It is not necessary to put gauze in the cervix or in the vagina, consequently there are no dressings to be attended to. The after treatment consists in regulating the functions of nature, and in removing the stitches from the abdomen. The open bowel treatment is employed, and, as a rule, the patient urinates without assistance.

42. **Persistent Mentoposterior Positions.**—Reed claims that engagement of the face in mentoposterior positions does occur, and that the face may reach the pelvic floor without anterior rotation. In almost all cases, the anterior rotation occurs spontaneously. Failure of the chin to rotate anteriorly is a definite indication for interference. In entering the pelvis, the length of the child's neck may permit the head to sink well down into the pelvis before the thorax is involved. Delivery of the unrotated chin, although extremely rare, is by no means impossible, and occurred in his series in 22.6 per cent. of the impacted cases. In 75 cases of impacted mentoposterior position, the maternal mortality (11.6 per cent.) under all circumstances about equals the maternal mortality (12 per cent.) of placenta prævia under aseptic conditions. The fetal mortality under all conditions is only a trifle higher than the fetal mortality of intrapartum eclampsia under the best and most modern conditions, and is far better than the reputed (100 per cent.) mortality. In the management, the position must always be corrected if the rotation does not occur spontaneously. Version is the operation of election, if the head is not engaged and manual flexion has failed. It is contraindicated after engagement. Manual correction by the Baudeloque, De Lee, Thorn or Volland methods should always be attempted. Forceps should be used with the utmost caution, if at all, and as a last resort before mutilating operations, for the fetal mortality is very high (50 per cent.), and, if employed, only the axis traction instrument should be chosen. If symphyseotomy is done, care should be taken to operate while the child is vigorous enough to justify it. Asepsis in the conduct of these cases ought to show a considerable reduction in the mortality figures.

43. **Yeast in Vaginitis and Endocervicitis.**—Schiller advocates the use of fresh brewer's yeast in the treatment of these affections: After cleansing the vagina with sterile water, two teaspoonfuls of fresh yeast and one teaspoonful of grape sugar solution or "bierwuerze" is introduced into the vagina through a speculum so that the portio and walls of the vagina are bathed with it. If this can be done at the patient's home it is preferable; if not, after a few minutes Schiller uses a tampon saturated with "bierwuerze" or grape sugar solution. This process should be repeated every 48 hours. After from 8 to 12 hours, a vaginal douche should be used. Affections in the vagina or on the cervix produced by *Saccharomyces albicans* or blastomycetes have never been observed after using yeast; a simple vaginal douche removes all the yeast used. The cases most suitable for this treatment are those of acute and chronic gonorrhea of the vagina and cervix, as well as those with or without gonococci in the discharge. Cases of purulent vaginitis and endocervicitis of other sources will derive more or less benefit, while cases of pronounced affection of the endometrium with a very watery discharge are not so easily influenced. He states that he has had no experience regarding the use of this method as a preparatory treatment for vaginal operations.

44. **Vaginal Atresia Complicating Labor.**—Hirst says that a Cesarean section is never necessary for uncomplicated vaginal stenosis. All these cases can be managed by manual dilatation, instrumental dilatation, hydrostatic dilatation, or, at the worst, deep lateral incisions of the cicatricial portion of the canal, followed by extraction of the child with forceps or by version. After the delivery the vagina must be repeatedly dilated, until the injuries or incisions have healed, in order to prevent the recurrence of the stenosis in a more serious form. Some of these cases will spontaneously dilate as the head descends and obviate the need of any operative interference. In the presence of complications, as in the case reported, Cesarean section may be necessary. If the operation is performed, the only one to be considered is the Porro operation, or hysterectomy.

Interstate Medical Journal, St. Louis.

May.

48 *Peculiar Alveolar Melanoma of the Choroid with Metastases. R. L. Thompson.
49 *Functional Diagnosis of Kidney Diseases. W. M. Robertson, St. Louis.
50 The Relation of the Defective to the Community. H. C. Wyman.
51 Acute Prostatitis. G. E. Lydston, Chicago.

48. **Alveolar Melanoma of Choroid.**—Thompson reports a case of tumor of the eye, coming from the choroid, which appeared in two forms—a definite pigment-bearing mass, and a spindle-cell mass which practically showed no pigment. The autopsy performed on the patient five years later showed metastases of both types of tumors in various regions. Sections of these metastases showed some of them to be alveolar melanoma and spindle-cell sarcoma while others showed a mixture of both varieties of tumor. The absence of intercellular substance, the tendency to grow in an alveolar arrangement, the presence of pigment, and the relation of the cells

to the blood vessels identified the tumor as an alveolar melanoma.

49. **Functional Diagnosis of Kidney Diseases.**—Robertson presents, in brief, the practical workings of the method as carried out in the clinic of Professor Casper. He concludes: 1, That functional diagnosis presupposes the ability to collect the urine from each kidney separately; 2, that in the present state of our knowledge the determination of the freezing point of the blood for the diagnosis of kidney sufficiency is of no value; 3, that the determination of the freezing point of the mixed urine, and the percentage of sugar in the mixed urine after the injection of phloridzin, on account of the wide variations to which they are subject, give no idea as to the sufficient action of the kidneys; 4, that the determination of the freezing point of the urine from each kidney, and the percentage of sugar in the urine from each kidney after the injection of phloridzin, give the most valuable information as to the existence of disease on the one side and of kidney sufficiency on the other; 5, that functional diagnosis in no way supplants or does away with the older methods of kidney diagnosis, that it is a supplement to them, and that while its employment requires much time and careful attention to detail, if it is carefully carried out it will add much to the surgeon's peace of mind and to the patient's welfare.

Canada Lancet, Toronto.

May.

52 Fever in Puerperium. K. C. McIlwraith, Toronto.
53 Lacto-Farinaceous Diet in the Intestinal Autointoxications. R. M. Beauchant. Portiers, France.
54 *The Prevention of Apoplexy. T. C. Allbutt, Cambridge, England.

54. See abstract in THE JOURNAL, May 6, 1905, p. 1487.

Pacific Medical Journal, San Francisco.

May.

55 Flat-Foot. E. H. Smith, San Francisco.
56 Doctor and the Man. A. Shirk, Oakland.
57 Micrococcus Rheumaticus; Its Cultural and Other Characters. J. M. Beattie.
58 Organized Water as a Food. J. U. Lloyd, Cincinnati.

Iowa Medical Journal, Des Moines.

May 15.

59 Supraorbital Pains. L. W. Dean, Iowa City.
60 Intestinal Obstruction. G. E. and J. L. Crawford, Cedar Rapids.
61 Recent Work in Joint Diseases. A. Egdahl, Iowa City.
62 Physician and the Non-English Speaking Patient. F. Rosenbladt, Audubon.

Dominion Medical Monthly, Toronto.

May.

63 Croup. E. Seaborn, London, Ont.
64 Status of Suprarenal Therapy. S. Floersheim, New York City.

American Journal of Urology, New York.

May.

65 Nephrectomy for Pyonephrosis, with Remarks on Functional Kidney Capacity. M. Krotoszyner, San Francisco.
66 Prostatic Abscess. J. A. Hawkins, Pittsburg.
67 Symptomology of Prostatic Diseases. J. L. Boogher, St. Louis.
68 Incontinence of Urine. T. M. Reade, Springfield, Ohio.
69 Technic of Cystoscopy and Ureteral Catheterization. L. W. Bremerman.
70 Alterations in the Posterior Urethra as a Factor in Neurasthenia. A. Ravogli, Cincinnati.

Canadian Practitioner and Review, Toronto.

May.

71 Neurology and the Prevention of Insanity in the Poor. C. Meyers, Toronto.
72 Toxemia of Pregnancy. K. C. McIlwraith, Toronto.
73 Home Treatment of Pulmonary Tuberculosis—Cases in Practice. E. Plater, Toronto.

Kentucky Medical Journal, Louisville.

May.

74 Treatment of Enlarged Prostate. I. Abell, Louisville.
75 Typhoid Fever. F. L. Lapsley, Paris.
76 Etiology and Pathology of Typhoid. V. V. Anderson, Barboursville.
77 Acute Articular Rheumatism, with Special Reference to Etiology and Diagnosis. A. C. Willmott, Hutchison.
78 Rheumatism. H. A. Elkourie, Nashville, Tenn.
79 Adenoids in the Naso-Pharyngeal Space. M. F. Coomes, Louisville.
80 Progress in General Medicine. J. A. Flexner, Louisville.

Old Dominion Journal, Richmond, Va.

May.

81 Edible and Poisonous Fungi of North Carolina, with Illustrations. J. W. Peacock, Thomasville, N. C.
82 Pneumonia; a Suggestion as to Treatment. L. G. Pedigo, Leatherwood, Va.
83 Typhoid Fever. W. J. Strother, Culpepper, Va.
84 Retro-Displacements of the Uterus. A. E. Baker, Charleston, S. C.

Northwest Medicine, Seattle, Washington.

May.

85 Rôle Played by the Nose and the Mouth in the Etiology of Tuberculosis. H. Stillson, Seattle, Wash.
86 Tuberculosis. I. Janson, Seattle, Wash.
87 Etiology of Tuberculosis and Its Governing Factors in Treatment. J. J. Leiser, Seattle, Wash.
88 Pancreatic Inflammations in Their Relationship to Cholelithiasis and Their Treatment. A. W. M. Robson, London, England.

St. Louis Courier of Medicine.

May.

89 The Shiga Bacillus. C. Fisch, St. Louis.
90 Vesicovaginal Fistulæ. R. Hill, St. Louis.
91 Baby Incubators on the "Pike." J. Zahorsky, St. Louis.
92 Ruediger Blood Test for Typhoid. G. C. Crandall, St. Louis.
93 Epithelioma of the Face in a Young Child. M. J. Lippe, St. Louis.
94 Review of Methylene Blue Eosin Blood Stain. G. C. Crandall, St. Louis.

Journal of the Mississippi State Medical Ass'n, Vicksburg.

May.

95 History of the State Insane Hospital: Supplemented by Some Observations on the Insane. T. J. Mitchell, Jackson.
96 Response to Address of Welcome. G. L. Harbour, Vossburg.
97 A Health Report from Bolivar County. H. L. Sutherland, Rosedale.
98 Gonorrheal Conjunctivitis. M. H. Bell, Vicksburg.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

May 6.

1 Discussion on Influenza. T. C. Allbutt, Cambridge.
2 Epidemiology on Influenza. H. F. Parsons.
3 Record of a Year's (1904) Operations in Clarence Ward (Gynecologic) of the Royal Victoria Hospital, Belfast. J. W. Byers and R. J. Johnstone, Belfast.
4 *Diazo-Reaction in Tuberculosis. C. W. Budden, Liverpool.
5 Tetany as a Complication of Gastric Dilatation. A. Trimble, Belfast.
6 Preliminary Note on a Leucocytozoan of the Dog. C. A. Bentley, Borjulie Tezpur, Assam.
7 Acute Poisoning by a Single Castor-Oil Seed. A. G. Gullan, Liverpool.

4. **Diazo-Reaction in Tuberculosis.**—Budden has watched the reaction in 3,000 persons, and has performed it many times in each, in order to determine its value as a diagnostic agent. He found that one or two precautions are required to obtain accurate and uniform results: 1. The test can not be performed except during the day, or by the use of pure white light. 2. The urine should not be more than 24 hours old, and should be kept covered. 3. Fresh solutions must be employed. The nitrite should be renewed weekly, the acid once a month. The proportions of the acid and the nitrite require accurate measurement. An excess of the latter, even in slight amount, will annul a delicate test. The 3,000 cases tested comprised 600 persons in health, and 2,400 suffering from disease. Of those in health, not one yielded a positive reaction. Of the remaining 2,400 cases, reactions were found in 96 cases of various forms of tuberculosis; 18 cases of measles; 17 cases of enteric fever; 5 cases of typhoid; 4 of acute lobar pneumonia; 1 case of acute bronchopneumonia; 1 of acute bronchitis; and 4 of puerperal septicemia, a total of 146 positive reactions in 880 cases examined. The remaining 564 cases, comprising almost every acute malady of common occurrence, continuously yielded a negative test. Speaking of the value of the test as an aid in the prognosis of tuberculosis, Budden says that his investigations lead him to believe that the reaction is not of any value. It is certainly true that those patients who gave the reaction have nearly all died; it is certain that in most cases the course was rapid; it is also true that its appearance and disappearance corresponded to the exacerbations and to improvement; it is also a fact that those not giving the reaction are patients who have shown improvement in their clinical course. This, to a large extent, agrees with what has been previously written. Were this all, such facts would indeed be sufficient, but they reveal only half the truth. The patients giving positive reaction have died, but they were precisely those patients for whom no hope could ever be entertained; many of these cases

have run a rapid course, but an equal number have run a slow course and even have shown improvement. The appearance of the reaction coincides with the exacerbations of the tuberculosis process, but it follows the onset of the graver symptoms, and though it disappears with improvement, such disappearance again follows the suspension of the alarming signs; while, again, it may disappear because the patient is growing weaker. A reaction blowing hot and cold in this manner can not be of very great reliability. Lastly, patients who have not given the reaction have mostly been in the early stages when hope is justifiable, while if it is absent in the latter stage it means nothing, since its appearance is intermittent, present one week, absent the next. It is probable that every fatal case of tuberculosis will yield the reaction at some period of its course. In view of the frequency of the intermissions, we can not say that any case is negative unless it has been tested constantly for long periods. Of the 17 patients who gave negative results and yet died, 6 succumbed to intercurrent diseases. Of the remainder, 2 were admitted *in extremis*, when the reaction is known to fade, so that it is not an unjustifiable conclusion to suppose that the other 9 were tested during an intermission.

The Lancet, London.

May 6.

8 *Some Old and New Remedies. W. Carter, Liverpool.
9 *Nutrition and Malnutrition. W. H. Allchin, London.
10 *Ten Abdominal Sections for Abnormal Pregnancies and Obstructed Labors. J. S. Riddell, Aberdeen.
11 *Blood Changes in Meningitis in Children. S. W. Curl, Colchester.
12 Two Cases of Trichromic Vision. F. W. Edridge-Green, Cambridge.
13 Observations on the Blood. C. W. Cunningham.
14 Tetanus and Chloral Hydrate. J. Maberly, Woodstock, Cape Colony.
15 Case of Hematoma of the Ovary Simulating an Attack of Appendicitis. H. W. Wilson, London.

8. **Some Old and New Remedies.**—In this paper Carter considers oil of turpentine, adrenalin, morphin and pilocarpin, illustrating his remarks by reference to cases.

9. **Nutrition and Malnutrition.**—In this, the second of the Lumleian lectures on this subject, Allchin considers the digestion, absorption and destination of the proteids, carbohydrates, and fats.

10. **Ten Abdominal Sections.**—Riddell gives the history of 10 abdominal sections for abnormal pregnancies and obstructive labors; 2 cases of ovarian tumor (dermoid cyst) obstructing labor; 2 cases of uterine fibroid, one obstructing labor, the other complicating pregnancy; 4 cases of extrauterine pregnancy; a case of tumor (chondroma) narrowing the pelvic outlet and necessitating Cesarean section; and a case of omental adhesions disturbing pregnancy.

11. **Blood Changes in Meningitis.**—Curl found that in tuberculous meningitis in children the red blood corpuscles usually are present in normal or increased numbers; that the majority of cases show no leucocytosis; that the eosinophiles are reduced in number, and that the large lymphocytes and transitional cells are generally present in increased proportions.

12. **Trichromic Vision.**—In the two cases reported by Green, the patients saw only three colors in the bright spectrum—red, green, and violet.

Journal of Tropical Medicine, London.

May 1.

16 Incidence of Disease in Hongkong. W. Hunter, Hongkong.
17 Spirilla Fever in South China. L. Hill.
18 *Form of a Malarial Parasite Found in and Around Jerusalem. J. Cropper, Ramullah, Palestine.
19 Congenital Macrodactylitis in the Philippines. I. W. Brewer.

18. **Malarial Parasite Found in Jerusalem.**—Cropper describes a new form of malarial parasite found in and around Jerusalem and occurring for the most part in children, who frequently have enlarged spleens—30 per cent. at five years or under. The patients had been ill often for months, with fever, generally of a quotidian type, rarely tertian. In about twelve cases the parasite was found in persons who complained of little or no fever, with perhaps headache, anemia, and sallowness. As a rule, the number of parasites in these cases was very small, and was only found after long search. This form of malaria described by Cropper is most refractory to quinin, although it yields in the end. The parasite corresponds with this, and can be seen days after quinin has been given in adequate doses (15 to 30 grains daily). The parasite described has occurred in 192 cases out of a total of 300 positive examinations; sometimes as a mixed infection, but generally alone. The youngest patient was 2½ months old, and 68 cases occurred in children under five years.

Annales de l'Institut Pasteur, Paris.

Last indexed page 1646.

20 (XIX, No. 4.) Propriétés bactériolytiques et anticytasiques du venin de cobra. F. Noc.
21 Sur un hématozoaire endoglobulaire nouveau d'un mammifère. J. J. Vassal (Annam).
22 Sur la signification du "Bacillus coli" dans les eaux potables (in drinking water). H. Vincent.
23 De la valeur thérapeutique de l'antitoxine dans le sérum antidiphthérique. L. Cruveilhier.
24 New Procedure for Detecting Ammonia and Its Salts in Drinking Water.—Etude sur un nouveau procédé de recherche de l'ammoniaque et des sels ammoniacaux. Applicable à la caracterisation des eaux potables. A. Trillat and Turchet.
25 Reaction of Land Turtle to Anthrax, to Glanders, to Rabies, to Tetanus and to Various Other Infections.—Réaction de la tortue terrestre à quelques maladies infectieuses. Remlinger and Osman Nouri (Constantinople).

Revue de Chirurgie, Paris.

Last indexed page 1321.

26 (XXV, No. 4.) *Foreign Bodies in Joints.—Des corps étrangers articulaires et en particulier des corps traumatiques au point de vue expérimental et histologique. V. Cornil and P. Coudray.
27 *Apropos des anévrysmes carotidiens. Pacheco Mendes (Bahia).
28 *Les gastrorragies dans l'ulcère simple de l'estomac. T. Tuffier and Jeanne. (Commenced in No. 2.)
29 *Des hémorragies intestinales consécutives à l'opération des hernies en général. L. Sauvé. (Commenced in No. 2.)

26. **Foreign Bodies in Joints.**—The origin and anatomic evolution of foreign bodies in the joints, especially the traumatic, have been studied by Cornil and Coudray by experiments on dogs, also from anatomic specimens and in the clinic.

27. **Aneurism of Carotid Artery.**—Mendes reports 2 cases of aneurism of the right common carotid artery; both patients were cured by extirpation of the sac. The patients were men of 62 and 42, and the first signs of the tumor had been noticed fourteen and eleven months previously, respectively. A ligature was thrown around the artery below, but in one case it was not drawn tight, the ends of the thread being held by assistants who were instructed to tighten the ligature if hemorrhage occurred. In the other case, the ligature was tied at once. The sac ruptured in each case, but the ligature prevented all hemorrhage of any amount. The operations proceeded smoothly and the patients recovered without mishap. The difficulty of extirpating the sac limits the application of this mode of treating aneurism of the carotid. Every case does not require extirpation, and the future of the intervention should not be jeopardized by resorting to it in all cases. Most of the patients with aneurism of the carotid are elderly, and it seems inadvisable to operate after the age of 60, as the operation is a serious one, and its benefits in these cases are only for a few years. The other contraindications are those of surgery in general.

28. **Hemorrhage from Simple Ulcer of the Stomach.**—The results of surgical intervention were 10 deaths in 15 operations before 1898, but Rodman's statistics in 1901 were 12 fatalities in 32 cases of acute hemorrhage. The results have been still more encouraging in a series of 24 more recent cases, the mortality being only 36.3 per cent. The mortality in operations for chronic hemorrhage has been about 12 per cent. and recurrences have been rare, Tuffier and Hartman never having encountered any. The details of all this material are summarized, and the lessons drawn that the ulcer is liable to be overlooked, and that the danger of infecting the peritoneum must be guarded against. The incisions should be ample and the interior of the stomach well lighted. The organ should be drawn out with thick compresses packed closely around it. The surgeon must guard against the slightest risk of infecting the serous membranes, even more than in operating in the pelvis. Preliminary lavage is superfluous and depressing. The various steps of the operations and the measures to meet the various indications are described in detail. Gastroenterostomy is the

treatment *par excellence* for chronic hemorrhages, but experience has shown that food is liable to linger and to be digested in the stomach afterward as before, consequently the mechanism by which it cures the hematemesis is still obscure. The hemorrhage sometimes recurs. Two deaths in 27 operations of this kind have been recorded in the literature. Porge lost a patient from hemorrhage five days after a gastroenterostomy to relieve stenosis from an active ulcer. Körte has also reported a sudden, fatal hematemesis twelve days after posterior gastroenterostomy on a patient 45 years of age who had suffered for twelve years from pains and hemorrhages in the stomach. The pylorus was found thickened, adherent, and inoperable. The autopsy revealed an ulcer in the lesser curvature with erosion of a branch of the coronary. The conditions were similar in another patient who also died about the eleventh day from hemorrhage due to erosion of the coronary by an ulcer adherent to the liver. In acute hemorrhage the ulcer itself should be attacked by excision, ligature or suture if it is easy of access. If not, gastroenterostomy should be done, especially in case of an ulcer in the pyloric region, with hemorrhages rebellious to medical measures. Gastroenterostomy is frequently effectual, but is not absolutely certain.

29. **Intestinal Hemorrhages After Operations for Hernia.**—Sauvé has been able to find records of 28 such cases, and thinks that the number would be much larger if the stools were systematically examined for blood after herniotomies. The hemorrhages may be classed as avoidable or non-avoidable, the former including the traumatic hemorrhages due to taxis or to perforation of the intestine. The unavoidable hemorrhages are of three kinds, those occurring early, during the first twenty-four hours, the hemorrhage not severe, but indicating a bad condition of the bowel, with arterial ischemia complicated or not with venous thrombosis. This is the Schnitzler type. The second type is Ulmann's first variety in which, with a good postoperative general condition, hemorrhage occurs from the fourth to the seventeenth day, without a prodrome, and is serious, being the result of retrograde arterial thrombosis of the dropping off of an eschar limited to the mucosa. The description of the third type is also from Ulmann's pen. In this form the hemorrhage occurs tardily after an operation for non-strangulated hernia, and is the result of retrograde arterial thrombosis or is due to a sympathetic reflex or to vasomotor paralysis. The intestinal hemorrhage has always been found to be of arterial or capillary origin. In the Schnitzler type, medical measures are alone indicated to permit the recuperation of the intestine. The recovery of the patient is scarcely retarded by this complication. In the Ulmann types, the character of the stool and pulse should be the guide to intervention. When the bloody stools contain gangrenous scraps, grayish and fetid, the probabilities are that they are from a patch limited to the mucosa, and the hemorrhage will yield to ice, opium and ergot if the surgeon is sure that he did not overlook any patch of gangrene in the peritoneum. One case is on record in which a stricture developed later at the site of the eschar. When the stools contain almost pure blood and the pulse is rapid, showing that the hemorrhage is due to something more serious than the mere falling of an eschar, an operation is practically *in extremis* and is a serious undertaking. Research is now under way for the purpose of establishing the real pathogenesis of this latter form of hemorrhage and the prospects for successful interference. The article concludes with a summary of the 28 cases on record. The list does not include any from America. A number of the traumatic hemorrhages proved fatal.

Semaine Médicale, Paris.

30 (XXV, No. 16, April 19.) L'infiltration ecchymotique diffuse de la face à la suite des compressions du tronc. F. Lejars.

31 (Nos. 17-18.) A Fifth Eruptive Disease.—Une cinquième maladie éruptive: le mégalérythème épidémique. L. Cheinisse (Paris).

32 L'épidémie actuelle de méningite cérébrospinale dans l'Europe centrale.

Deutsche medizinische Wochenschrift.

33 (XXXI, No. 16, April 20.) *Ueber Retroversio uteri gravidi incarcerata an der Hand eines mit schwerstem wirklichen Ileus komplizierten genesenen Falles (One case. Recovery). Dienst.

34 Zur Technik der Alexander-Adam-Operation. Robbers.

35 Zur Klinik und Aetiologie der Angina ulcerosa membranacea (Plaut-Vincent). M. Mayer and O. Schreyer.

36 *One Hundred Foreign Bodies in One Appendix.—Ein eigenartiger Fremdkörperbefund bei Appendicitis. Rebentisch.

37 *Zur Pathologie des Magen Carcinoms (of stomach). v. Tabora.

38 *Beiträge zur Lehre von der Beschäftigungsneuritis (occupation neuritis). H. Curschmann.

39 Zur Technik der Jodipin-Injektionen. Pelizaeus.

40 *Zur Behandlung der Meningitis cerebrospinalis epidemica. B. Kallmeyer (St. Petersburg).

41 To Reduce Danger to the Public from the Insane.—Die Gemeingefährlichkeit bei Geisteskranken und ihre Bekämpfung. Dannemann.

33. **Incarcerated Retrodisplaced Gravid Uterus with Ileus.**—The patient was a xii-para with a record of several abortions in the last few years. The retroflexion had probably occurred some time before and symptoms of incarceration developed about the fifth month of the pregnancy. The first symptom was a disturbance in urination, but catheterization every day for a week averted the danger of necrosis of the bladder from pressure of the incarcerated uterus. The urine was always sterile. The intestine became kinked and severe ileus resulted. When the uterus was restored to place the symptoms righted themselves at once. It is the first case on record of recovery from actual ileus under these circumstances.

36. **One Hundred Foreign Bodies in an Appendix.**—The patient was a woman of 74 who had had typhoid fever twenty years, and gallstone colic five years, previously. The appendix was included in an inguinal hernia and symptoms of appendicitis developed. When the purulent appendix was removed it was found to contain two grape stones, two other fruit stones, six splinters of enamel, three splinters of bone, a piece of a match, several small gravel stones and scraps of gallstones, a total of about 100 foreign bodies, of which the grape stones were the largest; 96 were large enough to be arranged on a card and photographed.

37. **Pathology of Gastric Cancer.**—Among the early signs of a cancer von Tabora mentions the small clots, less than the head of a pin in size, generally merely little black points, which are found in the siphoned-out stomach content. These clots are frequently encountered in case of cancer of the pylorus, although they may require the microscope for their differentiation. Hemorrhage in case of mere achylia gastrica is passed along out of the stomach too rapidly for the blood to form into clots. These clots have proved to be the very earliest symptom of cancer in the stomach, in his experience, preceding the discovery of lactic acid. The presence of Oppler's bacillus adds to the probability of cancer, as both require a long sojourn in the stomach. He has not found that the patients lose in weight, unless there is marked motor insufficiency with the cancer. A cancer on the lesser curvature may exist for months and years without appreciable loss in weight. With proper feeding, there may even be a gain in weight. He believes that it is almost impossible to distinguish between a benign ulcer and cancer of the pylorus, and the possibility of malignant transformation of the ulcer should not be forgotten. It is advisable to raise the general tone by dietetic and other measures before attempting any intervention on a pyloric cancer. If this is impossible, gastroenterostomy should be done first, and the radical operation should follow after an interval for recuperation. The benefit is sometimes surprisingly fine, even when a radical operation later is not practicable. The diagnosis of cancer of the normally located lesser curvature is more difficult, and this form of malignant disease is the despair of surgery. Certain surgeons have reported comparatively long survivals after operations, but analysis of their cases will show that the survivals are no more than the average life expectancy of cancers of the lesser curvature when left untouched. Even at best, the definite cures are less than 1 per cent. Exploratory puncture has a high mortality, and is very depressing to the patient, generally convincing him of the absolute hopelessness of his condition. As a rule, it may be said that a good Congo reaction, with increased amount of stomach content retained, indicates that the radical removal of the neoplasm is still possible, and gastroenterostomy is indicated. If the Congo reaction is negative, with increased

amount of stomach content retained, then gastroenterostomy to relieve the motor insufficiency is indicated. If the Congo reaction is negative, and if there is no retention of stomach content, and the lesser curvature is in the normal location, then any surgical interference is useless, except to relieve severe, urgent symptoms, when there is nothing to lose and everything to gain.

38. **Occupation Neuritis.**—A number of cases are described. In one the cause was the habit of resting the elbows on a high table while standing at work. Paresthesia, pain and weakness developed in the fourth and fifth fingers of the right hand, and proved rebellious to treatment. In another case, a young man made ice-cold applications to his inflamed eyes, pressing the cold cloth against the eye with his little finger. Symptoms of a neuritis developed in two or three days in this little finger, but the symptoms vanished under treatment after removal of the cause. An equally favorable termination was observed in a similar case in which the little finger had been submitted to a constant jar and vibration in tending a machine. The prognosis of a true occupation neuritis should be guarded, especially as lead poisoning, tabes, etc., are liable to attack first the radial and ulnar domain of the arm most used. The principal lesson of Curschmann's article is the importance of prophylaxis of these occupation affections.

40. **Treatment of Epidemic Cerebrospinal Meningitis.**—Kallmeyer's advice as to the treatment of this disease has been quoted in recent cable dispatches. He states that mercury, quinin, venesection and narcotics have proved ineffectual. A purgative dose of calomel may be useful at first, but after this enemata are preferable, if necessary. The internal or better still, the subcutaneous administration of arsenic is useful and harmless. It should be commenced the moment the disease is recognized. The doses should progressively increase, and slight fever is not a contraindication. The heart should be stimulated with camphor injections, and great attention should be paid to a suitable and strengthening diet. The main reliance should be on warm baths, at a temperature of about 93 degrees F., with douches of water at a temperature of about 90 degrees F. These baths should be commenced as early as possible in the disease, but not repeated, as a rule, oftener than once a day. Four attendants stand at the four corners of the bed and lift the patient by taking hold of the corners of the under sheet and lifting it with the patient into the bath tub. He remains in the bath for from eight to fifteen minutes, suspended in the sheet, and is then replaced in bed in the same way. Kallmeyer has thus treated and cured two very severe cases of the epidemic variety and a number of sporadic cases.

Münchener medicinische Wochenschrift.

42 (LII, No. 14, April 4.) *Ueber familiären Tremor. Schmaltz.
43 *Ueber periphere Schwangerschaftslähmungen (paralysis of pregnancy). R. Hoesslin.
44 Ueber Aphthæ tropicæ oder indische Spruw. H. Richartz.
45 *Experimentelles zur Pankreas- und Fett-Gewebsnekrose. Hess.
46 *Retrogression of Choked Disc with a Brain Tumor.—Ueber die Rückbildung der Stauungspapille bei Hirntumor. G. Flatau.
47 *Adenokarzinom und Sarkom am gleichen Menschen. H. Landau.
48 Ueber den Gebrauch der haltbaren Borsauer-Aluminumazetatlösung (durable solution of boric acid and aluminum acetate). K. Ludwig.
49 Blood Changes at High Altitudes.—Die vermeintlichen Blutveränderungen im Gebirge. E. Meissen.
50 Laryngeal Tuberculosis in Pregnancy.—Weiterer Beitrag zur Kehlkopfschwindsucht der Schwangeren, etc. O. O. Fellner.
51 Zur Frage der Schultzeschen Schwingungen (swinging). A. Hengge.

42. **Family Tremor.**—Schmaltz gives the family history of three families which include a number of cases of hereditary, essential tremor. He sifts the literature on the subject, and mentions that in his experience the tremor was never accompanied by any serious nervous affection. He personally examined 9 of the 20 cases of tremor in the 30 persons comprised in the three families he reports. Some of the "tremblers" lived to an advanced age. In some the tremor developed in childhood, in others not until late in life, after some accident to self or to dear ones. The tremor persisted through life, unmodified, in some, but in others, under hygienic measures, it improved or subsided altogether. All treatment proved ineffectual. Differentiation is based on the hereditary and family character of the tremor, the lack of disturbance in speech, vision or intelligence, the absence of vertigo, apoplectic symptoms and convulsions, and the benign, non-progressive type of the tremor.

43. **Peripheral Paralysis of Pregnancy.**—This writer last year published a comprehensive monograph on the central pregnancy paralyses. He grouped them as (1) those without anatomic findings: hysteric or myasthenic paralyses of pregnancy; (2) cerebral paralyses of pregnancy: due to apoplexy, albuminuria, thrombosis or embolism in the brain or to other brain affections; and (3) the spinal paralyses of pregnancy. Strümpell has recently observed a number of cases of this last category: actual spastic paralysis with an unmistakable connection with pregnancy and childbed. In the present article, von Hoesslin describes the peripheral paralyses of pregnancy, classifying them as myopathic and neuritic. The first group includes osteomalacic paralysis and polymyositis. The neuritic paralyses may be of traumatic, of toxic, or of postinfectious origin, and may extend by contiguity of nerve tissue. He reviews his extensive experience with each of these types, urging that more attention should be paid to the possibility of such an origin when studying any case of paralysis. The prognosis of the toxic neuritis of pregnancy is the more unfavorable the more extensive the paralyses and the more rapid their development. In 50 severe cases, 10 terminated fatally, while the more localized cases all terminated in recovery. The chances of curing by interrupting the pregnancy are by no means so favorable as in case of chorea gravidarum. Analysis of the hitherto published cases shows that the polyneuritic symptoms did not abate after spontaneous delivery, but rather displayed a tendency to exacerbation. The conclusion seems inevitable that the toxins causing the affection are produced even in the puerperium, possibly in connection with the involution of the genitalia. The pregnancy should not be interrupted, therefore, unless absolutely necessitated by some vital indication or commencing atrophy of the optic nerve. Under the circumstances, the procedure has undoubtedly been beneficial in many cases. Postinfectious puerperal neuritis is almost invariably ulnar and median, and gradual recovery is the rule. The prognosis of traumatic obstetric paralysis is better the less extensive the lesions. When limited to the leg, improvement is noted in a few weeks at farthest, but if extensive and accompanied by atrophy the prognosis must be cautious. Recurrence is also liable after childbirths later. In 92 cases of toxic neuritis of pregnancy or the puerperium uncontrollable vomiting had preceded its appearance in 19 instances. Hyperemesis gravidarum thus occurred in 34 per cent. of the 46 severer cases of toxic neuritis. In some cases they developed simultaneously. This speaks decidedly against the assumption of a hysteric nature for hyperemesis gravidarum, and points unerringly to autointoxication. The cellular elements of the nerves display degenerative changes with proliferation of the interstitial connective tissue. In about half the cases general polyneuritis with muscular atrophy results. In 16 of the 40 severer cases, Korsakoff's psychosis was more or less evident.

45. **Experimental Study of Necrosis of the Pancreas.**—The experimental research reported by Hess from Marburg showed that fatty necrosis can be induced in the pancreas of dogs by stenosis of the duodenum combined with a lesion of the papilla followed by introduction of fat into the pancreas. The saponification which is set up at once when the fat comes in contact with the pancreatic juice, causes a destructive process leading to necrosis. Many cases of apoplexy of the pancreas, etc., may be due to the penetration of fat from the intestines into the pancreas. The cicatricial sequelæ which follow a destructive process of this kind may explain certain cases of chronic indurative pancreatitis.

46. **Retrogression of Choked Disc with Brain Tumor.**—A girl of 16 exhibited symptoms of serous meningitis—headaches and choked disc—after typhoid fever. Both symptoms were relieved by mercurial treatment and by lumbar puncture which was repeated seven times in the course of six months

with the complete retrogression of the choked disc. The symptoms recurred three months later and the patient soon succumbed. The autopsy revealed a small-celled glioma in the left cerebellum. Flatau presents evidence from other writers which shows that lumbar puncture is sometimes able to induce the retrogression of choked disc even in case of a brain tumor.

47. **Variety of Tumors on One Individual.**—Landau thinks that the patient described holds the record for variety of neoplasms. He was a well-nourished, brunette man of 38, with several pointed exostoses on the lower jaw and an osteoma on the upper jaw as large as an apple. The cheek and legs showed several pigmented nevi, the rectum an adenocarcinoma and polypi and the mamma a fibrosarcoma. The two malignant growths were excised and the patient is in robust health to date, seven months since the operation.

Zeitschrift f. klinische Medizin, Berlin.

Last indexed page 1570.

52 (LVI, Nos. 1-2, Naunyn Festschrift, Part II). Catalase of Milk.—Die Katalase der Milch. E. Reiss.
53 Symptomatologie der Fistula gastrocolica carcinomatosa. G. Sandberg.
54 Diphtherie-Antitoxin Bestimmungen bei Mutter und Neugeborenem (in mother and newborn). H. Kayser.
55 Cytodiagnostik eines Falles von Lymphdrüsenkrebs (adenocancer). E. Ducros.
56 Behavior of Carbonic Acid in Stomach.—Das Verhalten der Kohlensäure im Magen. K. Loening.
57 Epileptic Spasms in 2 Cases of Diabetic Coma.—Ueber das Vorkommen epileptischer Krämpfe beim Koma der Diabetiker. J. Lossen.
58 Zur spezifischen Therapie der Febris recurrens (experiments with serotherapy). G. Gabritschewsky.
59 Focal Symptoms in Psychoses Leading to Dementia.—Ueber Herdsymptome bei den zur Verblödung führenden Psychosen. M. Rosenfeld.
60 Ueber unsere Kenntnis der mit dem Carcinom in ursachliche Verbindung gebrachten tierischen und pflanzlichen Mikroorganismen. E. Cohn.
61 Respirations-Versuche an diabetischen Menschen. A. Magnus.
62 Beitrag zum Stoffwechsel Magenkranker (metabolism in stomach affections). A. Loew.
63 Origin of Stearic Acid Needles in Dittrich's Plugs and Determination of Fat-Destroying Microbes.—Ueber die Herkunft von Fettsäurenadeln in Dittrich'schen Pfropfen und den Nachweis von Fett-zersetzenden Mikroben. G. Schwartz and H. Kayser.
64 Ein operativ behandelter Fall von Pneumomycosis aspergillina. G. Schwarz.
65 *Significance of Traces of Blood in Typhoid Stools.—Ueber das Vorkommen von Blutspuren in den Darmabgängen von Typhuskranken und deren Bedeutung. C. Petracchi.
66 Diagnostic Importance of Bactericidal Properties of Typhoid Serum.—Ueber die diagnostiche Bedeutung der bakteriziden Eigenschaften des Blutserums Typhuskranker. K. Laubenheimer.
67 Ueber die Wirkung der v. Noordenschen Haferkur beim Diabetes mellitus (oatmeal in diabetes). S. Lipetz.
68 Influence of Pregnancy on Acute Infectious Diseases.—Ueber die Beeinflussung der häufigsten akuten Infektionskrankheiten durch Gravidität, nach dem Material der Strassburger medizinischen Klinik von 1888-1904. A. Brion.
69 (Nos. 3-4.) *Die Diagnose als aetiologischer Factor. O. Rosenbach.
70 *Experimenteller Beitrag zur Tuberculose-Frage. F. Klemperer.
71 *Ueber das Wesen der Hämophilie. H. Sahli (Berne).
72 Ueber die Phosphate des Mageninhalts (of stomach contents). von Tabora.
73 Ueber Senkung und Agglutination von Blutkörperchen (of blood corpuscles). H. Brat.
74 Die Bakterien Befunde bei Scharlach und ihre Bedeutung für den Krankheitsprocess (bacteriology of scarlet fever). G. Jochmann.
75 Fall von sensorischer Ataxie der Augen-Muskeln (ocular muscles). H. Feilchenfeld.
76 Zur Mechanik der Expectoration. E. Reichmann.
77 Influence of Elimination of Glucuronic Acid on Acidosis.—Ueber die Einwirkung der Glucuron-Säure Ausscheidung auf die Acidose. J. Baer and J. Wohlgemuth. (Commenced in Nos. 1-2.)

65. **Significance of Traces of Blood in Typhoid Stools.**—This article was reviewed editorially in THE JOURNAL for April 15, page 1203.

69. **Diagnosis as Etiologic Factor.**—Rosenbach refers to the way in which different physicians diagnose, some diagnosing a disease where another would regard it as highly dubious or non-existent. The consequence is that the statistics presented by different physicians vary widely on the same material. For example, since the presence of the plasmodia is now regarded as indispensable for the diagnosis of malaria, the number of cases of malaria now encountered is apparently very much less than in former years when all suspicious fevers were classed as malaria. The more accurate diagnosis merely pushes the cases of disease observed into other classes, and statistics show a "remarkable decrease in malaria of late years," while, in reality, the morbidity may be even higher than previously. This constant reclassification of diseases and acceptance of new standpoints for their consideration, is of extreme importance in the drawing of conclusions in regard to prevailing morbidity, and in our conceptions of the causes of mortality and of the results of treatment. He urges that the only reliable test for the efficacy of a new remedy or serum is for each alternate case to be treated with and the next without the remedy in question. Long series of cases treated alternately with and without, would solve the problem of the efficacy of the serum or other remedy better than it can possibly be solved in any other way. He complains that physicians display an incredible lack of critical judgment when new remedies are introduced.

70. **To Immunize Against Tuberculosis.**—Klemperer reports a number of experiments which have established the feasibility of rendering already infected cattle immune by subcutaneous injection of human tubercle bacilli. Calves infected with bovine tuberculosis and treated afterward with human tubercle bacilli remained healthy while the controls all succumbed to the bovine tuberculosis. Subsequent inoculation with human tubercle bacilli evidently exerts inhibiting and attenuating influence on bovine tuberculosis. Attempts to apply these conclusions to man are now under way. The first step was to determine the absolute harmlessness of subcutaneous inoculation of tuberculous persons with bovine tubercle bacilli. Klemperer established this by injection in his own person and also by injections in a tuberculous physician who volunteered for the experiments. The latter was injected fourteen times, and the bovine tubercle bacilli, after a single passage through a guinea-pig, were absorbed without any acute reaction, just as in Klemperer's experiments on himself. The same results were observed with 4 tuberculous patients who likewise volunteered their services. The harmlessness of the procedure, he states, is thus amply established, and the results observed suggest the possibility of successful immunization of persons in the early stages of tuberculosis by systematic subcutaneous injection of bovine tubercle bacilli. The guinea-pigs were inoculated with fresh tuberculous glands from cattle, injected subcutaneously into the abdomen. When the resulting tuberculosis was at its height, in about three or four weeks, they were killed and a piece of an inguinal gland and of the spleen studded with tubercles—about 2 gm. of substance in all—were ground in a mortar and suspended in 10 c.c. of physiologic salt solution with 1 to 4,000 formalin, and then filtered through gauze. He calls this the "suspension" (*Rindertuberkelbacillen-Aufschwemmung*). It is very virulent for guinea-pigs for as long as eight days. The human subjects were injected in the forearm with 0.25 c.c. of this suspension.

71. **Essence of Hemophilia.**—Sahli has had occasion to study hemophilia in three families and to trace it through two or three generations. The abnormally low coagulating power of the blood was a marked feature in these families. His observation and research force him by exclusion to accept the theory that the wall of the blood vessels, when it is injured, produces a "thrombokinase" or zymoplastic substance at the spot, which aids in the coagulation of the blood at this point and arrests the tendency to hemorrhage. In the hemophilic organism, the vessel walls are defective in this respect and do not produce the chemical substances which induce local coagulation. Treatment should aim to raise the general health, especially with a good and generous diet. Cases are on record in which the tendency to hemophilia vanished as the patients became robust. There is no reason for preference for a vegetable diet. This was suggested by the supposed analogy between hemophilia and scorbutus, for which in fact there is not the slightest justification. Compression and local gelatin applications may be useful to arrest the accessible hemorrhages especially when preceded by local application of adrenal extract. Gelatin internally is harmless but probably useless. There are no grounds for the internal or subcutaneous use of adrenal extract or ergot. Calcium chlorid internally is still awaiting judgment. The local application of ferric chlorid answers no purpose. It is

still a question whether or not benefit may be derived from local application of calcium chlorid or of the zymoplastic substances or "thrombokinase" in the form of tissue juices or their extracts. If applied, they should be forced into the lumen of the vessel as much as possible by the compressing bandage. The same or better results will probably be accomplished by pressing into the lumen of the bleeding vessel a thick and firmly applied 2 per cent. gelatin gauze dressing. Any attempt to apply the "thrombokinase" and zymoplastic substances otherwise than locally would probably be dangerous. A number of tests on 4 hemophilics are described and 60 articles from the literature are cited. The prompt success of local applications of gelatin in arresting the hemorrhage was confirmed again and again in his experience. Sahli's views were discussed in an editorial on page 1198.

Riforma Medica, Palermo and Naples.

78 (XXI, No. 13, April 1.) *Sulla etiologia e patogenesi del cancro. G. Maniscalco (Tricomi's clinic, Palermo).
79 Study of Metabolism in 2 Cases of Chronic Leukemia.—Ricerche di ricambio nella leucemia cronica. F. De Grazia.
80 (No. 14.) *Passage of Autotoxins and Agglutinins into Milk and Their Absorption.—Sul passaggio delle agglutinine ed antitossine tubercolari nel latte e loro assorbimento per via del tubo gastroenterico. F. Figari.
81 *Su alcuni punti della cura medica e chirurgica del male di Pott. A. Campani. (Commenced in No. 13.)
82 Sclerosi laterale amiotrofica familiare e Pellagra. T. Armando.
83 Sui disturbi oculari della paralisi generale e sul loro raffronto con quelli della tabe dorsale (ocular disturbances). C. Mannini.

78. **Origin of Cancer.**—Maniscalco has succeeded in producing in dogs lesions which resemble those of incipient cancer of the stomach. He opened the stomach and cut a pedunculated rectangular flap and also cut out a piece of the abdominal wall of the same shape and size, and sutured the stomach flap in its place. He then closed the stomach and abdomen as perfectly as possible. He scraped the mucosa of the stomach flap and irritated it every day with alcohol or ammonia or with a toothpick. The reaction that followed presented the features of cancerous growth, as he shows by various illustrations of sections. The results of these and other experiments which he describes have convinced him that the reaction to irritation causes a proliferation of the glandular elements which seek to substitute the constantly destroyed lining epithelium. The differentiation is not physiologic, but pathologic and irregular, and the elements of the epithelium behave irregularly also, growing downward into and through the muscularis mucosæ with metastasis in the submucous connective tissue. He thinks that this idea of pathologic proliferation of glandular tissue as the origin of malignant growths is sustained by the fact that cancer never develops in organs that have no glandular tissue.

80. **Milk of Cows, Goats and Rabbits Immunized Against Tuberculosis.**—Figari found that tuberculosis agglutinins and antitoxins passed into the milk of cows and goats actively immunized against the disease and into the milk of rabbits passively immunized. The kids born of immunized mothers inherit the defensive materials from the mother, and the amounts increase as they continue suckling. Calves and kids born of non-immunized mothers are able to absorb in the digestive tract the agglutinins and antitoxins contained in milk from immunized animals. More than this, these agglutinins and antitoxins are able to excite the formation of other agglutinins and antitoxins. Rabbits passively immunized by subcutaneous injection or by ingestion of the immunized milk are able to transmit in their milk to their young both agglutinins and antitoxins. Adult rabbits fed on milk from immunized cows absorb in their digestive tract the antitoxins and agglutinins contained in the milk, and their serum is found to have high agglutinating and antitoxic power. He describes his various experiments in detail. The results confirm in every particular, he adds, Maragliano's assertions in 1903 in regard to the possibility of the passage of the immunizing substances into the milk of immunized animals and their absorption in the digestive tract when fed to other animals, with their subsequent specific action in the organism.

81. **Pott's Disease.**—Campani thinks that the prognosis of this affection is not so grave as many believe. There is a tendency to spontaneous recovery, and if Nature is aided in time the final outcome is liable to be excellent. Various roads lead to the desired goal, but in general, puncture and rinsing out the cavity will be found sufficient. This simple procedure can be done by any one and almost anywhere, while it is much safer than other technics. He prefers to rinse the cavity after puncture with a 1 per 1,000 salicylic-acid solution, using at least 5 liters of the fluid, or until it emerges clear. It may be necessary to repeat the rinsing two or three times. He introduces the fluid through a Plessi return-flow canula, and the rinsing is easily done in a quarter of an hour. He gives the history of several cases thus treated and re-examined several years afterward. The affection healed slowly, but surely, after the injections, and the patients are all free from any disturbances. Those whose cases are described in detail were from 20 to 42 years of age. There is scarcely a trace of their former affection, and all have gained materially in weight, one nearly 60 pounds. In some of the cases the disease had caused paraplegia, but this rapidly subsided under cold hydrotherapy.

Medicinskoe Obozryenie, Moscow.

Last indexed page 1411.

84 (LXI, No. 8.) Ten Cases of Purpura and 3 of Hemophilia in Children.—Nyeskolko slutchaev purpuri i hemophilii u dyetei. I. M. Rakhmaninoff.
85 *Primary, Non-Diphtheric Croup.—O pervitchnom ne difftherilnom krup. P. P. Istomin.
86 (No. 9.) *Conservative Vaginal Operative Treatment of Uterine Fibromata.—Konservativnii vlagalishtchnii metod op. lyetcheniya fibrom matki. V. V. Uspensky.
87 Influence of Diphtheria Toxin on Nitrogen and Mineral Metabolism in Animals.—O vliyanii diph. toksina no azotistii i mineralnii obmyen u zhevotkikh. M. M. Bremener.
88 *Urobilinuria.—O nakhozhdenii urobilina v motchye. M. G. Shtchegoleff.
89 (No. 10.) *Traumatic Facial Paralysis.—O paralitchakh lyzevogo nerva vslyedstvie nestchastnykh slutchaev. L. S. Minor.
90 O neuropathitcheskoe nepodvizhnosti pozvonotchnika ("rigid spine"). M. Shaikevitch.
91 *Functions of Great Omentum.—O funktziakh bolshogo salnika. L. A. Jacobson.
92 (No. 11.) *K diagnostikye raka zheludka (of gastric cancer). I. Rusloff.
93 Motility of Lymphocytes and Its Significance in Cytodiagnosis.—Aktivnaya podvizhnost lymphocytov i znatchenie eya dlya cytodiagnosa. V. T. Polyakoff.

85. **Non-Diphtheritic Croup.**—Istomin describes 8 cases of severe membranous croup in which it proved impossible to detect the presence of the Loeffler bacillus. Streptococci, influenza bacilli and diplococci were found, and symptoms of grippe accompanied or preceded the manifestations of croup, the maximum phase being reached about the fourth day. Intubation was required in some of his cases and he never failed to inject antidiphtheritic serum; it produced an unmistakably favorable effect, supplemented by hot mustard foot baths and inhalation of steam.

86. **Conservative Vaginal Removal of Uterine Fibromata.**—Uspenski reports 12 patients thus operated on between 1883 and 1903. The operations proceeded smoothly and the after-results were excellent.

88. **Urobilinuria.**—The Schlesinger zinc acetate test for urobilin in the urine was found both sensitive and reliable in the experiences reported. They are summarized in tabulated form. They demonstrate that a certain amount of urobilin can always be found in normal urine, although the traces may be too minute to be revealed by ordinary reagents. If fluorescence appears in the fluid while it is being tested with zinc acetate under ordinary light, this is a sign of abnormally increased destruction of red corpuscles somewhere in the body. The presence of urobilin in the urine can be accepted as a sign of the toxic action of the products of some infection on the red corpuscles, or else as a sign of diapedesis of the red corpuscles, as in transudates. In a case of myocarditis the liver was apparently normal, but its insufficiency was revealed by its inability to transform the urobilin into bilirubin.

89. **Traumatic Facial and Trigeminal Paralysis.**—Three cases are described in detail and are discussed from the standpoint of industrial accident insurance. Two are illustrated and the claims for damages are established on the amount of disability.

91. **Functions of Great Omentum.**—Experiments were made on 8 dogs to test the functions of the great omentum. The animals bore resection of part of the omentum without trou-

ble, and no lesions could be discovered in stomach or liver which could be attributed to the resection. The capacity of transudation shown by the omentum is slight, about equal to that of the intestinal serosa. Further tests also demonstrated that the omentum possesses considerable capacity of absorption. His experiences confirmed those in the clinic in regard to the lesser sensitiveness of the omentum in comparison with the intestine.

92. **Diagnosis of Cancer of Stomach.**—Rusloff relates the clinical history of 4 cases of gastric cancer to bring out certain diagnostic points. Among them is the differential importance of a systolic murmur heard in the epigastric region, caused by compression of the trunk of the aorta by the cancerous tumor in the stomach. This sign has not been credited with the importance which it deserves for the diagnosis of a gastric cancer, especially in those cases in which the cancer develops backward rather than toward the front, and is thus less accessible to palpation. The systolic murmur also serves to locate a suspected cancer. It is heard on the linea alba, or a little to the left of it, on the middle third of a line connecting the ensiform process with the umbilicus. The murmur can not be heard from the rear, in which it differs from the findings in cases of ordinary aneurism of the aorta. The murmur was observed until death in the cases reported. In one instance the diagnosis based on the murmur was not confirmed by palpation findings until after three months had elapsed.

Hospitalstidende, Copenhagen.

Last indexed page 1411.

94 (XLVIII, Nos. 6-7.) *Om intermitterende Halten (dysbasia angiosclerotica, intermittent limping). E. Kirkstein.
95 (Nos. 9-10.) *Behandlingen af Epididymitis tuberculosa. H. Strandgaard.
96 (No. 11.) Apparatus for Test of Color Blindness.—Et Farveblandingsapparat til Undersogelse af farveblinde. A. A. Meisling.

94. **Intermittent Limping.**—Kirstein describes 3 cases of angiosclerotic dysbasia with the Roentgen findings, and reviews the similar affection in horses. The arteriosclerosis was evident in the Roentgen pictures of the foot in his cases. The patients were men of 60 to 68 years of age, and the trouble had been of several years' duration. In the 2 cases described in detail the fact is mentioned that the men were great smokers, one averaging seven strong cigars a day.

95. **Treatment of Tuberculous Epididymitis.**—Strandgaard describes in detail Rovsing's technic as exemplified in 12 cases of tuberculous epididymitis. In 5 the lesion was confined to the genital organs, and in 7 the urinary apparatus was also involved. All the patients in the first group were permanently cured and 1 in the second group. All in the second group were very much relieved by the operation, and in most cases the inevitably fatal outcome was postponed for several months. In case of doubt whether the testicle is sound, he removes the epididymis, but leaves the testicle untouched, and supervises the case further. If the testicle proves to be pathologic it can easily be removed later, but, if not, the patient is spared unnecessary mutilation. He thinks that this is better than making an exploratory incision in the testicle.

Correspondenz-Blatt f. Schweizer Aerzte, Basle.

Last indexed page 915.

97 (XXXIV, No. 24.) Wann soll man bei Appendicitis operiern? H. Haberlin (Zurich).
98 *Relation of Chronic Articular Rheumatism in Children to Tuberculosis.—Chron. Gelenkrheumatismus der Kinder und seine Beziehungen zur Tub. J. Karcher (Basle).
99 (XXXV, No. 1.) Fibromyxom des Wurmfortsatzes (of appendix). E. Monnier.
100 *Zur Therapie der infantilen Bronchopneumonie. T. Zangger.
101 (No. 2.) Kasuistischer Beitrag zur Ureter-Resektion mit konsekutiver Ureterocystanastomose. H. Friolet (von Herff's clinic, Basle).
102 Relations Between Retinal Hemorrhage During Birth and Glioma Later.—Beziehungen der während der Geburt entstehenden Retinalblutungen des Kindes zur Pathogenese des Glioma retinæ. E. Wehli.
103 (No. 3.) Annihilation of Child's Life During Birth.—Die Vernichtung des kindlichen Lebens während der Geburt. Meyer-Wirz.
104 (No. 4.) *Blood Pressure and Measurements.—Ueber Blutdruck und Blutdruckmessung. A. Martin (H. Eichhorst's clinic, Zurich).
105 (No. 5.) Seven Cases of Fish Poisoning.—7 Fälle von Fischvergiftung. A. Stoll (Zurich).
106 (No. 6.) *Ueber Diagnose und Behandlung der Nieren und Blasen-Tuberkulose (of kidneys and bladder). H. Wildbolz (Berne).
107 (No. 7.) *Die therapeutische Bedeutung der Lumbal-Punktion im Kindesalter (in children). L. Tobler (Vierordt's clinic, Zurich). (Commenced in No. 5.)
108 *Zur Pathologie und Therapie der Streptomykosen. F. Schwarzenbach.
109 (Nos. 8-9.) *New Method of Investigating the Chemistry of the Stomach Without the Stomach Tube.—Ueber die Prüfung des Magenchemismus unter natürlichen Verhältnissen und ohne Anwendung der Schlundsonde. Die Desmoid-Reaktion. H. Sahli (Berne).
110 10 Fälle von Herz-Insuffizienz im Militärdienst (heart insufficiency during military service). R. Staehelin.

98. **Relations Between Chronic Rheumatism in Children and Tuberculosis.**—In Karcher's case, the patient was a girl of 12, whose father and several other relatives were tuberculous. She had been healthy until her eighth year, when a primary, chronic polyarthritis of the hands and feet developed. After persisting several years it subsided under general treatment for tuberculosis. No antirheumatic remedies had shown the slightest efficacy. He is convinced that this form of rheumatism in children has a closer connection with tuberculosis than is generally recognized, and advocates treatment on this assumption.

100. **Treatment of Bronchopneumonia in Children.**—Zangger reports 10 cases of bronchopneumonia in children 3 months to 11 years of age in which defervescence was realized in one to four days. He ascribes this favorable result to his method of giving the little patients from one to seven "half baths" of four to seven minutes each, the water at a temperature of from 30 to 28 C., gradually reduced to 26 or 24 C. (86 to 82 F., reduced to 78 or 75 F.). The room must be moderately warm, and the child must be placed in a bath tub with only enough water in it to cover the body, leaving the breast almost uncovered with water. The child is rubbed during the bath, and after two minutes cool water is added to bring the water down to the desired temperature. The child is then rubbed dry with warm towels and put back to bed. These half baths are given night and morning; a little milk is given to the child before and after the bath. The diet should be milk, diluted or not, and cold spring water should be sipped frequently. His experience has been that these baths twice a day raise the blood pressure, strengthen the heart, promote expectoration and soothe the nerves, etc., much better than any other measures.

104. **Blood Pressure and Measurements.**—Martin reviews recent work in this line and lays emphasis on the fact that the pulse curve is no criterion for the blood pressure. The systolic pressure can be determined by application of Gaertner's tonometer or the Riva-Rocci sphygmomanometer with a 10 cm. tube. The latter instrument is more reliable and also allows the diastolic pressure to be determined. Among the more interesting recent work in this line is Federn's research in Vienna. He is convinced that gout, arteriosclerosis, hemorrhoidal conditions and neurasthenia never develop except on the basis of an abnormally high blood pressure. The symptoms of neurasthenia vanish, he asserts, when the blood pressure is reduced to normal. The blood pressure is also high in constitutional syphilis. In icterus and in influenza the blood pressure is very low. His experiences are noteworthy, as they were in a family practice, and he had generally opportunity to know the state of the blood pressure before the development of the illness. On the whole, Martin adds, the fruits of research on the systolic pressure have been very scanty in comparison with the time and labor spent on it.

106. **Tuberculosis of Kidneys and Bladder.**—Wildbolz comments on the difficulty of differentiating tuberculosis of the urinary apparatus. The patients do not feel seriously ill, but complain merely of being a little depressed, easily fatigued and dyspeptic. The only sure sign is a slightly turbid urine. Generally nothing else calls attention to the bladder or kidneys. He describes several cases to illustrate this almost latent symptomatic course of severe tuberculous processes in these organs. Other cases presented the picture of chronic cystitis; the urine should always be examined bacteriologically in such cases. The bladder affection may be due to a primary focus in a kidney, and removal of the latter will cure the secondary process. If restricted to the bladder, the treatment should be purely medical. Operative intervention is altogether discarded now for tuberculous affections of the bladder. The

organ must be rested, and should be treated only with small injections of the desired drug. The best treatment in his experience was injection of 5 to 10 gm. of a 1 to 5,000 or 1 to 3,000 solution of corrosive sublimate in the empty bladder, or the same amount of a 5 per cent. guaiacol oil to which 2 per cent. iodoform had been added. These injections were made at intervals of two or three days, with a sedative in the form of a suppository to relieve the pain and to aid in keeping the bladder quiet. Such treatment systematically kept up for weeks and months will frequently improve to a remarkable extent, or cure entirely, a primary bladder tuberculosis. He has performed nephrectomy in 9 cases and assisted others in 4 cases of unilateral renal tuberculosis, and the results have been eminently satisfactory. The secondary bladder processes always healed soon afterward.

107. **Lumbar Puncture in Children.**—Tobler reports the various cases in which children were treated by lumbar puncture at Vierordt's clinic. The fluid should be withdrawn slowly and gradually, the patient reclining. The more fluid present the more can be allowed to escape. In 2 cases of hydrocephalus, 400 and 650 gm. of cerebrospinal fluid were drawn, with the best results. In certain cases of meningitis, symptoms developed one or two days after the puncture, demonstrating the excessively sensitive condition of the meninges. The symptoms were relieved by a second puncture. In case of suspicion of a brain tumor, puncture is contraindicated. It proves beneficial in almost all cases presenting symptoms of accumulation of cerebrospinal fluid. Tuberculous and suppurative meningitis, however, do not respond favorably to the punctures. Even slight, transient benefit is scarcely ever obtained. In 16 cases of tuberculous meningitis, in which lumbar puncture was applied 25 times, there was only slight, fleeting improvement in 4 cases, with, in 1, the subsidence of the Cheyne-Stokes respiration. In 2 of the cases the patients died two days after the puncture, and in another it was evidently responsible for the vomiting, trismus and general tremor that followed. In 7 cases of otogenic or postscarlatinal meningitis, the little patients all died, no benefit being apparent from the 10 punctures that had been made. The results of lumbar puncture were far better in 7 cases of epidemic cerebrospinal meningitis. In some instances the benefit was striking, but in others none was apparent. When the first puncture does no good it is useless to repeat it. In some of the cases, with a pressure of from 20 to 60 mm. Hg, the punctures were unmistakably beneficial, while in others, with pressure of from 20 to 30 mm., no results were evident. The particulars of 3 cases in which the punctures were most strikingly beneficial are given in detail. No cure of congenital hydrocephalus is on record, possibly because the punctures have not been systematically repeated long enough. Excellent results were attained in 2 cases of postmeningitic hydrocephalus, and some transient benefit was observed in a case of postmeningitic idiocy.

108. **Treatment of Streptomycosis.**—Schwarzenbach describes how the germs are inhaled in dust and settle in the crevices in the upper air passages. Prophylaxis should aim to reduce dust and to render the air passages more resistant with prompt and persevering treatment of all catarrhal affections. If the throat is once infected, the toxins from the primary focus spread through the body, and the results are liable to be acute or chronic muscular or articular rheumatism, sciatica, headache, neuralgias, eternally recurring pharyngitis or tonsillitis or streptococcus grippe. If it is impossible to eradicate the infection entirely on account of the ever-recurring new infections, the focus at least can be rendered temporarily harmless and the production of toxins arrested. For this purpose he advises daily rinsing of the throat and nose with isotonic salt solution with subsequent insufflation of some mild antiseptic powder. The mucosa must not be irritated or the treatment will do more harm than good.

109. **New Test for Stomach Functions: "The Desmoid Reaction."**—Sahli's test is the ingestion of some stain, methylene blue or iodin, enclosed in some substance which passes unaltered through the alimentary canal unless digested by the action of the normal stomach secretions. He accomplishes this by enclosing the stain in a bag of goldbeater's skin. This is merely the uncooked connective tissue from the cecum of cattle. If 1 gm. of iodoform is wrapped in a square of this skin and swallowed, the stomach secretions digest the skin and the stain escapes, with a marked iodin reaction in the saliva or urine in a few hours. Tests with 92 patients amply confirmed the correctness of these assumptions. He has since modified the test, as he found that the goldbeater's skin varied so much in thickness that the tests were not uniform. He now uses a square of the finest rubber dam of the dentists, 2 mm. thick. A piece about 4 cm. square is dusted with talcum powder to prevent its sticking, and a pill containing .05 methylene blue and .1 gm. of iodoform with extract and pulv. licorice āā .04 gm. is placed in the center. The corners of the square are brought together and a very fine and soft catgut is wound three times around the little bag thus made and tied tight with a double knot. The protruding ends of the rubber are then cut off about 3 mm. from the catgut, with care not to snip them off with a single stroke of the scissors, but to cut the rubber in a single thickness to avoid any possible sticking together of the edges of the bag. The pill is heavier than water and sinks to the bottom of the stomach when it is swallowed, which should be after the usual midday meal. The patient is instructed to urinate at 5 and 7 p. m. and again in the morning and to save the urine in separate labeled flasks. The saliva can also be inspected for the iodin reaction. Sahli calls this test the desmoid reaction, from the Greek term desmos, a ligament or connective tissue. In health the urine shows the stain the same evening. The catgut or connective tissue is submitted to the same digestive process as the food in the preceding meal, and the results enable the natural digestive processes under natural conditions to be estimated as by no other test yet devised. He is convinced that the results of this simple and convenient test will supply data for determination of the appropriate diet in certain cases, for the adaptation of the digestive stimuli to the chemical functional capacity of the stomach, and solve various other problems in the physiology and pathology of the stomach, while as a diagnostic measure it has the advantage of being carried out under natural conditions and without any unusual features in regard to diet, etc. A positive reaction always indicates normal digestion, according to his experience. A negative reaction is generally the indication of some gastric disturbance. The little bags can lie in water for twenty-four hours or in pancreatic juice or in a 1 or 2 per cent. solution of hydrochloric acid without any escape of the stain. Nothing but a combination of hydrochloric acid and pepsin digests the catgut and releases the stain in the bag.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ENLARGEMENT OF THE PROSTATE; Its History, Anatomy, Etiology, Pathology, Clinical Causes, Symptoms, Diagnosis, Prognosis, Treatment, Technic of Operations and After-Treatment. By J. B. Deaver, M. D., Assisted by A. P. C. Ashhurst, M. D. Illustrated with 108 Full-Page Plates and a Colored Frontispiece. Cloth. Pp. 266. Price, $7.00 net. Philadelphia: P. Blakiston's Son & Co. 1905.

TUMORS OF THE CEREBELLUM. By C. K. Mills, M.D., C. H. Frazier, M.D., G. de Schweinitz, M.D., T. H. Weisenburg, M.D., and E. Lodholz, M.D. Cloth. Pp. 179. Reprinted from the *New York Medical Journal*. New York: A. R. Elliott Publishing Co. 1905.

DRINK RESTRICTION (Thirst Cures), Particularly in Obesity. Part VI of Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. C. von Noorden. Cloth. Pp. 86. Price, 75c. New York: E. B. Treat & Co. 1905.

THE HISTORICAL RELATIONS OF MEDICINE AND SURGERY to the End of the Sixteenth Century. An Address Delivered at the St. Louis Congress in 1904. By T. C. Allbutt, M.A., M.D. Cloth. Pp. 125. Price, $1.00 net. New York: Macmillan & Co. 1905.

A TREATISE ON PLAGUE, Dealing with the Historical, Epidemiological, Clinical, Therapeutic and Preventive Aspects of the Disease. By W. J. Simpson, M.D. Cloth. Pp. 466. Price, $5.00. Cambridge: The University Press. 1905.

A TEXT-BOOK OF MEDICAL PRACTICE for Practitioners and Students. Edited by W. Bain, M.D. With Illustrations. Cloth. Pp. 1011. Price, $7.00 net. New York: Longmans, Green & Co. 1904.